

**Don't cheat  
yourself:**

**Scenarios  
to clarify  
collusion  
confusion.\***

*\* needs  
citation*

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Don't Cheat Yourself: Scenarios to clarify collusion confusion

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## Preface to the revised first edition

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By the time that the first edition of this e-book became available in late 2018, some two years after the project that led to it began, awareness of contract cheating as another threat to academic integrity in all disciplines, including mathematics, was growing. The nature of much mathematics assessment, each assignment or online exam being comprised of a set of shorter questions, meant that patchy work with wide variation in quality and accuracy between items on the same submission was at first puzzling to assessors, and then recognized as a possible sign of unpermitted outsourcing of some or all items (TEQSA, 2021).

The original Scenarios J, K, M, T and W refer to posting assessment items to online forums and accessing other students' work from peer-to-peer file sharing sites (Rogerson & Basanta, 2016). Like collusion, the original focus of the book, that these actions could be academic misconduct might possibly be unclear, since to some extent they resemble permitted forms of help seeking. However, blatant commercial contract cheating was not directly addressed in the first edition. The various forms that assessment took during the Covid-19 lockdown periods of 2020-2021, and the isolation and pressures experienced during those times, were exploited by commercial providers of cheating services (Lancaster and Cortalan, 2021). During 2020, I wrote several new scenarios in which commercial contract cheating and the pandemic circumstances featured. As with the original scenarios, these are informed by direct experience as an assessor, and by published literature about the manipulative commercial contract cheating industry.

The actor names and the names of the new scenarios reflect the times in which they were written. Roman numerals for 19 (XIX) and 40 (XL, *quaranta* in Italian) – the once traditional length of a quarantine – have been used. VL is not a Roman numeral, although it resembles one; it is based on an abbreviation for 'Virtual Learning'.

This revised first edition enables these new scenarios to be made available to students and to other mathematics educators alongside the original 26, all of them now covered by a different creative commons license which permits adaptive re-use. There have also been a small number of minor corrections to the original text.

Katherine Seaton, February 2023.

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## About the Author

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Katherine Seaton is an Associate Professor in the Department of Mathematics and Statistics at La Trobe University.

She has a Bachelor of Science (Honours) and Ph. D from the University of Melbourne, and a Graduate Certificate in Higher Education (Curriculum, Teaching and Learning) from La Trobe.

Katherine has published articles in the areas of mathematical physics, maths applications, tertiary mathematics education and mathematics and the arts.

Her particular interest in mathematics education is in assessment. Katherine has over twenty-five years' experience in tertiary mathematics teaching, recognised by several La Trobe teaching awards, and is a passionate communicator of mathematics both to La Trobe students and in outreach activities.

Her hobbies include fibre arts and reading.



PHOTO BY LA TROBE UNIVERSITY PHOTOGRAPHY USED WITH PERMISSION

# Acknowledgements

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This book could not have come into being without:

- funding from the La Trobe University College of Science, Health and Engineering Teaching and Learning Internal Grants Scheme, which made the scenario writing possible, and paid for the valuable and meticulous research assistance of Dr Stacey Mendan
- helpful conversations during that project
  - in person with La Trobe colleagues Prakash Veeraraghavan (Computer Science), Robert Ross and Andrew Martchenko (Engineering) and Robyn Yucel (La Trobe Learning and Teaching)
  - by telephone with Professor Shelley Yeo (Curtin University)
  - by email with Judithe Sheard (Monash University)
- feedback from participants at the workshops where the scenarios were trialled
  - *Show your working. Your working*, First Year in Maths 2016, and Australian Association of Mathematics Teachers Conference 2017
  - *Integers, Integration and Integrity*, Australian Conference on Science and Mathematics Education 2017w
  - *Don't cheat yourself: Clarifying collusion confusion*, La Trobe University School of Engineering and Mathematical Sciences Teaching and Learning Workshop 2017
  - *Academic integrity for non-text tasks*, La Trobe University Scholarship of Learning and Teaching (SOLT) seminar, 2018
- the Shut Up and Write group convened by the Research Education and Development (RED) team at La Trobe University
- the relevant insights I have gained from working with my colleagues in Mathematics and Statistics, and on the University Appeals Committee.

Thank you all.

This book is dedicated to my parents, who developed my mathematics, writing and character; and to my family – John, Laura and Millie.

# Interactivity

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This etextbook has multiple interactive elements that extend and expand upon the content. It is recommended that Adobe Acrobat be used to utilise these interactive elements.

## Glossary Terms

Look out for Glossary Terms in **bold** throughout the text; when clicked these terms link to the glossary at the end of the etextbook. (Use the command Alt + Left Arrow to return to your place in the PDF).

## Annotation

Annotating this etextbook is a useful tool and is great for taking notes on the pages. The easiest way to add comments is to use the sticky note tool in Adobe Acrobat. For more information and instructions on how to annotate PDF's there is a tutorial on the [Adobe website](#).

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# Introduction

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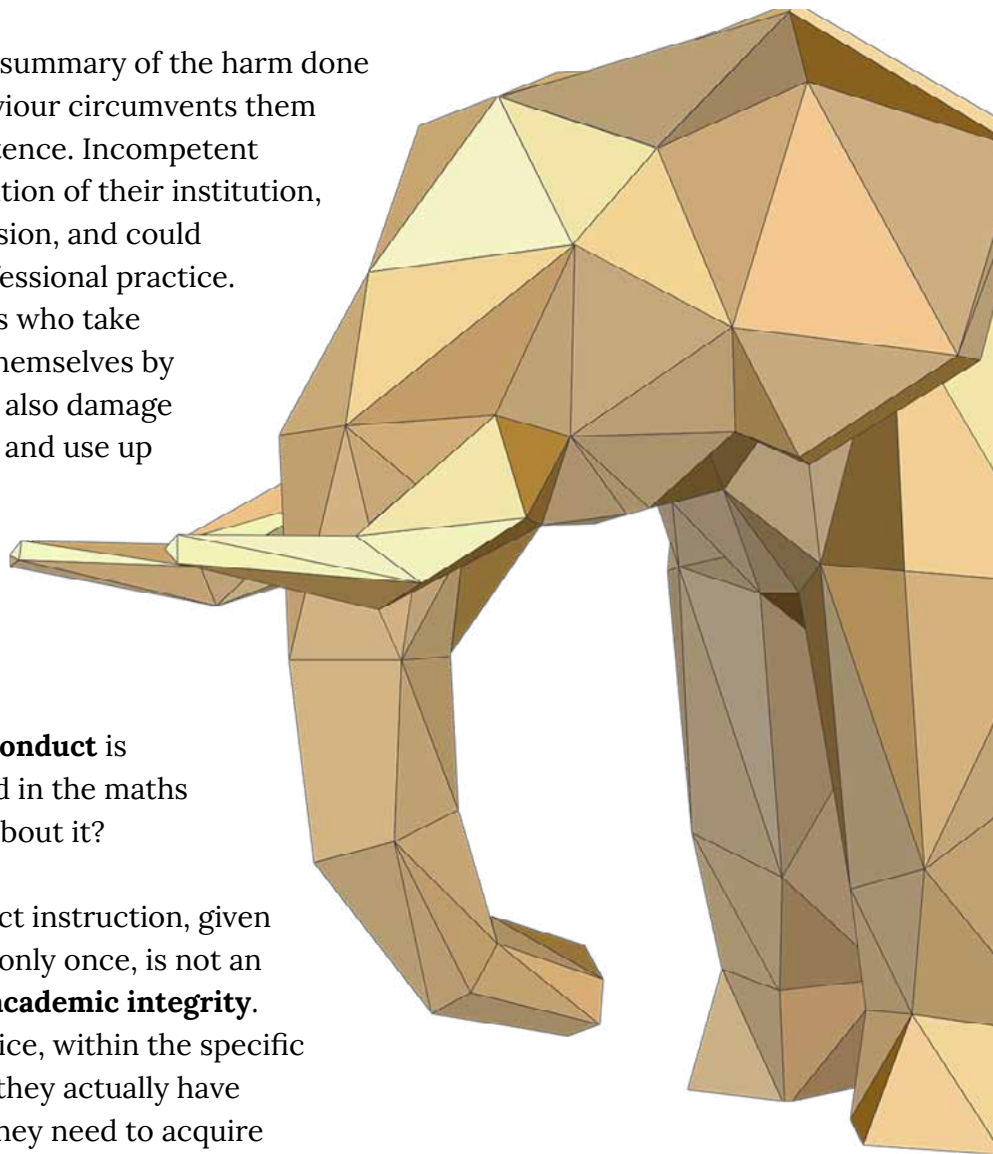
In the growing body of literature about undergraduate **academic integrity**, both instructional and analytical, there is a gaping hole. Mathematics is ‘missing in action’. This gap has been pointed out, for example, by Simon (2016, p. 778) and by Gilmore, Maher, and Feldon (2016, p. 734). As a mathematics student, the dearth of information that is of immediate relevance to the situations in which you find yourself might make you feel confused and sometimes stumbling, as if you are in a maze or an obstacle course. (For mathematicians assessing student coursework, the issue is not only a gap in the literature, but an elephant in the room.)

Dick et al. (2003) give a good summary of the harm done by students when their behaviour circumvents them developing their own competence. Incompetent graduates damage the reputation of their institution, their degree and their profession, and could endanger others in their professional practice. During their studies, students who take proscribed shortcuts affect themselves by missing out on learning; they also damage the educational environment and use up their teachers’ time, which should be spent more positively; and they gain unfair advantage over other students.

So, given that **academic misconduct** is harmful, and under-examined in the maths context, what should we do about it?

East (2006) found that abstract instruction, given ahead of any tasks and given only once, is not an effective way to learn about **academic integrity**. Students need reiterated advice, within the specific context of the types of tasks they actually have to do (Riedesel et al., 2012). They need to acquire a procedural rather than a purely theoretical knowledge of what constitutes **academic integrity**.

In their first year, mathematics or computer science students do not generally have to read and cite primary sources. Hence, it is unreasonable to expect them to extrapolate from abstract instruction about paraphrasing, referencing and direct quotation, how the principles of academic integrity apply to solving unseen or even routine problems.



'ELEPHANT POLYGON' FROM PIXABAY USED UNDER CC0

Yet this sort of general, ‘one-size-fits-all’ instruction, immediately after first enrolling, has often been the only kind that students experience (Simon & Sheard, 2015, 2016).

This book was developed in response to the need for a customised resource for mathematics educators and students. Its format was inspired by the work of Yeo (2006, 2007) undertaken with Australian science students. She used sentence-long science-specific scenarios to gauge student and staff understanding of actions and interactions that may or may not be acceptable. Based on her findings, Yeo proposed that students should also learn about academic integrity through scenarios. Scenarios have also been used as a tool in the research of Sheard and her numerous collaborators in computer science, and in the work of Barrett and Cox (2005) and O’Malley and Roberts (2012). The longer, story-like scenarios of Riedesel et al. (2012), which they linked to the computer science industry’s code of conduct, were also an important influence on this book.

Chapter 1 outlines major themes in the literature about academic integrity that are pertinent to this book, and explores the nature of mathematics assessment. Because the landscape in which we all function has changed so much in the past 15 years – thanks to technology, social media, computational platforms and text-matching software – older literature has not been included. It also defines and discusses forms of **academic misconduct**; the definitions are summarised in the Glossary.

Chapter 2 presents the 26 scenarios that form the core of this book. They are intended to promote thoughtful discussion among students, and between students and their teachers. Each is described in one or two paragraphs, presented on a single page, accompanied by suggested questions. In some cases, there is additional information about how the scenario unfolds, to direct the discussion or to raise new issues; the extra information is followed by one or more further questions.

Chapter 3 summarises the issues that may be raised by each of the scenarios in Chapter 2. It also refers to the academic integrity research literature, so that interested readers can explore the issues further. The possible outcomes discussed, in terms of any consequences for behaviour, refer to the policies and procedures of La Trobe University at the time of writing.

The scenarios and discussion questions were developed in a 2016 project, titled *Don’t cheat yourself: Clarifying collusion confusion*, funded by the La Trobe University College of Science, Health and Engineering Teaching and Learning Internal Grants Scheme. The name of the project was carefully chosen to indicate that shortcuts in learning ultimately short-change the individual. Clearly, breaches of **academic integrity** also offend against the assessor, the institution and community standards of behaviour (Borg, 2009); however, abstract ideals may not be as compelling as personal ones

*“Today I am going to give you two examinations, one in trigonometry and one in honesty. I hope you will pass them both, but if you must fail one, let it be trigonometry...for there are many good [people] in this world today who cannot pass an examination in trigonometry, but there are no good [people] in the world who cannot pass an examination in honesty.”*

- Madison Sarratt (1891-1978), Dean, Vanderbilt University

(Ashworth, Bannister, & Thorne, 1997).

This project title has been adapted for the book.

The title also acknowledges that as a student you may sometimes genuinely be unaware of what is an acceptable amount of interaction with others in producing answers or responses to assessment tasks, particularly when interactions in class are encouraged (McGowan, 2016). Where does discussion end and **collusion** take over? East (2006) argues that the conventions of Australian academic culture may have been learned implicitly, or may be taken for granted by its members; East advocates for discussion between students and lecturers, rather

than a simple list of blanket instructions or rules, so that questions can be explored and concerns raised. Riedesel et al. (2012) noted that a lack of intentional thought can result in a failure to act with **academic integrity**; indeed, stimulating intentional thought is precisely what this book is intended to do. Although individuals can work through the scenarios, they are primarily intended to be used as discussion starters in lectures, tutorials or online forums. The start of a subject or shortly before an assessment task is assigned are suitable times to consider one or two of them. Sutton and Taylor (2011) found that students wanted to discuss **academic integrity** in tutorials with a tutor, not just be informed about it via a handout or a booklet. This book contains a large enough collection to allow a single cohort of students to discuss fresh scenarios as they progress through subjects and year levels.

Most of the scenarios in this resource are mathematical; however, some of them refer more generally to assignments, and others refer specifically to computer laboratory work or programming assignments, which arise in computer science or engineering as well as in maths and statistics. Some of the scenarios are also suitable for use by secondary school students and their teachers. They do not feature forms of conduct that are unambiguously proscribed and deceptive, such as impersonation and the most blatant forms of **contract cheating**. Also, they do not feature supervised, timed examinations, given that the integrity of a student's work in such exams is generally assured by the same means for all disciplines (e.g. effective supervision, exclusion of technology and unseen questions). Some of the scenarios feature misconduct, whereas others describe behaviour that is actually fine, because it is important for students

to know what is allowed and what is not in order to come to a clearer understanding (Riedesel et al., 2012). Sutherland-Smith (2013) notes that students want to know about acceptable practice as well as unacceptable practice.

Stepp and Simon (2011) asked computing students to write their own scenarios for class discussion; they were to illustrate student-to-student **collaboration** that was at the boundary of inappropriate. The resulting scenarios often lacked precision. Although the study participants saw this as a fault, the authors noted that it opened up the possibility for discussion. In reality, the interactions between human beings are often imprecise and subject to interpretation, which is exactly why the scenarios given here may leave you unsure of whether there is a 'right' answer (as those who trialled the scenarios found). East (2006) had a similar experience with the scenarios she used in her practice. Realising that one's actions and motives may be construed differently by another, or that what is clear to one person may be obscure to someone else, will be helpful as students and their assessors grapple together with the difficult problem of **academic misconduct**.

As they say in the movies, the scenarios in Chapter 2 are inspired by true events, but all characters are fictitious and no identification with actual persons is intended. The names used in the scenarios have been made up, with no intention of assigning to them a particular gender or nationality.

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# **Chapter 1**

# **Mathematics and Academic Integrity**

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## 1.1 Mathematics – It's clear cut, isn't it?

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Ah, what did people do before Turnitin? Text-matching software is now almost universally applied to prose text assessment in universities, both by students (before submission) and by assessors (as part of the assessment process). Such software has found little or no application in mathematics or statistics assignments. In a discussion of **plagiarism** in science education, O'Malley and Roberts (2012) point out that, unlike constructed prose in essays, the working for calculations in chemistry and physics, and for simple problems in mathematics generally, does not bear the signature style of individual students. It is not always possible to customise maths tasks to create responses that can be differentiated (Barrett & Cox, 2005). As with computer science, in mathematics and statistics, the 'deliverables tend to have somewhat uniform structure, making similarity detection more difficult' (Simon, Cook, Sheard, Carbone, & Johnson, 2014). (Indeed, some students and academics believe that the correct responses in these disciplines are formulaic or must be identical (Simon & Sheard, 2015); in my opinion, this is an over-simplification.) Fraser (2014) points out that, owing to the nature of computer science, the best answers will be highly similar, the compiler being 'a relentlessly unforgiving arbiter of correctness' (Roberts, 2002). And it is not just the answers that are confined; Stepp and Simon (2011) have described the constraints on the types of tasks arising in introductory programming assignments.

Clearly, if students were put to the trouble of typesetting their maths calculations so that they could be electronically scanned for identical combinations of characters, high levels of matching would need to be considered, most of which would actually be recognised as reasonable. Furthermore, typesetting mathematics is time-consuming, and is not necessarily a skill that needs to be learned for many of the careers to which first- or second-year students of maths may be headed; it would be an inefficient and inauthentic (and thus highly unpopular) activity for them. It adds unnecessarily to the cognitive load (Rowlett, 2014). Hence, submitting handwritten assignments is still a common experience for mathematics students across Australia.

Simon and Sheard (2016) and Dick et al. (2003) found that manual detection of misconduct by computer science academics is commonplace (more so than automated techniques). This detection involves, for example, noticing similarities in code, uneven quality or sudden improvement in a student's work, or the incorporation of content that is beyond the scope of the course. What, then, makes a maths lecturer begin to wonder whether the work on which they are providing feedback (positive or negative) has been created by the person whose name is on that piece of work, and whether it



is a true reflection of that person's understanding? At the time of writing, there are no published studies of **academic integrity** in tertiary mathematics assessment. We must speculate, based on anecdotal evidence.

Perhaps the working is incorrect or incomplete, but somehow it manages to 'result' in the correct final answer.

Maybe a cluster of students submit work that is almost identical, and that contains unusual mistakes (rather than common errors seen across the cohort) or the same misinterpretations (e.g. not only is the answer incorrect, it is the wrong kind of mathematical object).

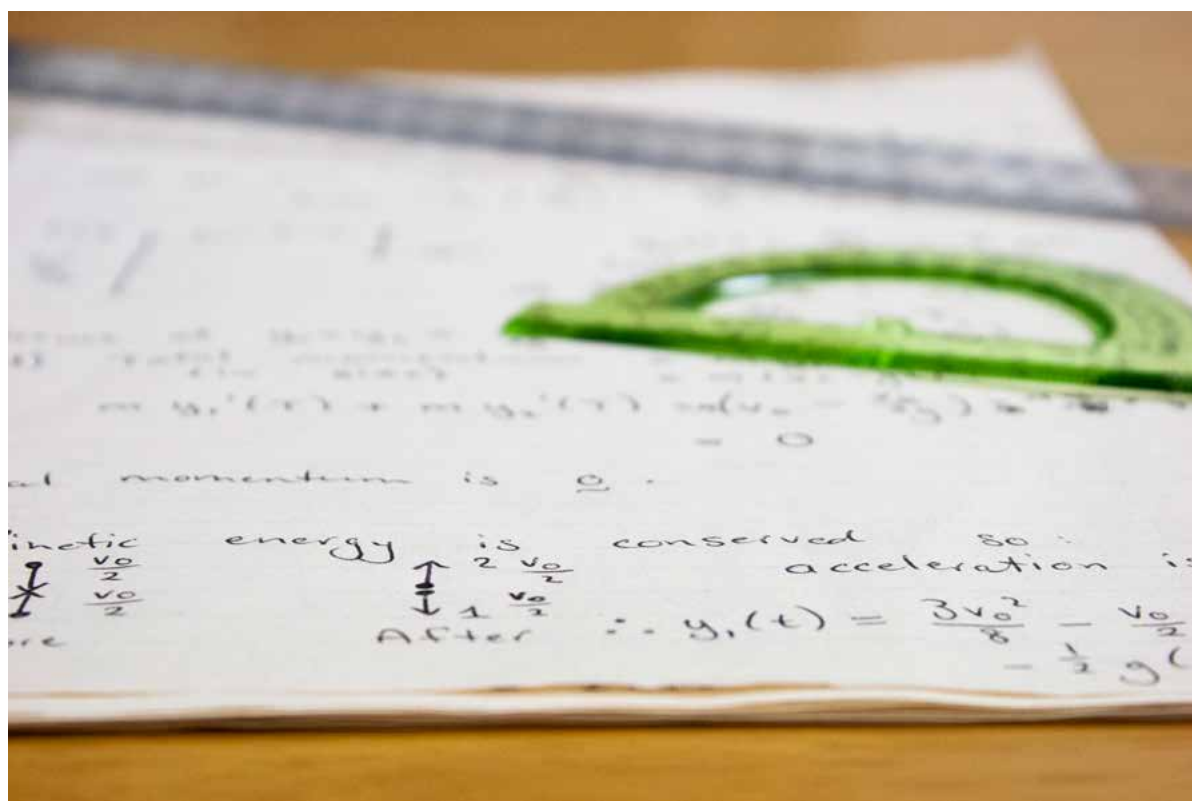


PHOTO BY JONATHAN NEWMAN.

Or a student submits nonsense working that seems to have come from transcribing without reflection or understanding; for example, a  $z$  turns into a  $2$  then turns back into a  $z$  later on, a colon becomes an equals sign over the course of a few lines, or the paragraph spacing and line breaks match those of another student, even though the size of the handwriting is quite different.

Perhaps the language and form of the answers are more sophisticated than the current level of instruction, suggesting that the student has consulted an outside source (paid or unpaid) rather than the course notes; for example, early in the first semester, a first-year student uses the term 'affine subspace' to interpret a set geometrically, whereas at this level students simply use the term 'line'.

Possibly the form of the answer is unusual or unexpected, suggesting that it came from a technological source without any critical interpretation (e.g. an answer is expressed in hyperbolic functions, which have not yet been taught, rather than in exponential functions, which have). Biddle (2017) suggests that such responses result from students relying on computer algebra system (CAS) calculators, mathematical software and online resources such as Wolfram|Alpha.

You may think that there is no problem with the last two cases – if a student gives a right answer in any form, it is right, end of story. But that is to misunderstand the purpose of assessment. Assessment is not simply a transaction, wherein the marker is keen to see good answers (however they are produced) for which a correspondingly high mark will automatically be given in return (Fraser, 2014). Rather, coursework assessments are a key part of the learning experience, with the end goal being deepened understanding (Barrett & Cox, 2005). It is the process (procedural understanding), as well as the product, that must be under the student's control (McGowan, 2016). The value of the experience is lost if one simply procures the answer (Roberts, 2002).

There will be more comments about the nature of mathematics assessment in Section 1.3, but we next consider what the experts say about undergraduate **academic misconduct** and explain how it relates to this book.



## 1.2 Themes in studies of academic integrity

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The extensive, and growing, literature in **academic integrity** can be broken into at least six loose strands.

Many studies estimate how much problematic behaviour is occurring and whether this has changed over time. Others investigate whether particular student groups (by demography or discipline) are more likely than others to engage in it. These two strands in the literature, which are largely quantitative, do not directly inform this book, apart from affirming the need for it!

The next two strands were fundamental in developing the scenarios of Chapter 2 and discussion of them in Chapter 3. They are the reasons or rationalisations that students give for **academic misconduct**, and the understanding that students and academics have of what comprises acceptable or unacceptable behaviour. Largely, these strands have been investigated by surveys, focus groups and interviews.

A fifth strand of discussion concerns ways to reduce problematic behaviour. Sheard and Dick (2012) identified four types of strategies suitable in different situations: prevention, education, detection and consequence. This book is primarily educative; however, detection and consequence do inform the scenarios and discussion items in Chapters 2 and 3. Prevention initially referred to implementing assessment regimes (including scaffolded or customised tasks) that reduce the perceived need of or the ready opportunity for misconduct. More recently, Sheard et al. (2017) have elaborated on what prevention looks like in practice; that is, discouraging cheating, reducing its benefits and making it more difficult, as well as (more positively) empowering and supporting students. Hence, this book can be seen also as preventive, taking a proactive approach by equipping students to act with integrity through improved understanding of **collusion**.

Picking up on the theme of support and empowerment, the idea is emerging in the literature that enhancing other aspects of the teaching and learning environment, rather than focusing only on improving instruction about what constitutes misconduct, can prevent misconduct. To date, this idea seems to be coming mainly from Australian authors. The students interviewed by Devlin and Gray (2007) voiced the opinion that being underprepared or frustrated with the quality of teaching led to some misconduct. Simon and Sheard (2015) reported that struggling to do work unaided but finding it difficult to source permitted help is a factor (though it is not necessarily a justifying

one) in students seeking out unauthorised ‘help’. McGowan (2005) promoted the idea of enabling students to develop their academic skills as a response to some misconduct, rather than giving them an automatic penalty. Following a recent, large study, Bretag et al. (2018) encapsulated this idea nicely in their recommendation that fostering ‘personalised teaching and learning relationships’ with students is something that university staff can do in the face of the problem of outsourcing behaviours.

Although the terms necessarily pervade all the strands of discussion, definitions and taxonomies of categories into which specific behaviours can be classified – **plagiarism**, **copying**, **collusion**, patch-writing, cheating – form a distinct strand in the literature. We establish the definitions to be used in this book later in this chapter (see Section 1.4), and summarise them in the Glossary.

For the most part, those writing about **academic integrity** either gloss over mathematics or fail to acknowledge it. Even in the important and recently published Handbook of academic integrity (Bretag, 2016), which runs to more than 1,000 pages, there is so little about mathematics that it can be reproduced here in its entirety:

*In mathematics it is sometimes the case that there is only one correct answer to a given question, even if that answer is many lines long. A mathematical proof, for example, is far more constrained in its form than a computer program or a musical composition. Markers will therefore expect all correct answers to be close to identical. In these circumstances, neither plagiarism nor collusion can be suggested by measures of similarity – except where two or more students have submitted assessment items displaying the same egregious error. This might help to explain why no literature has been found on academic integrity or its breaches in mathematics education.*

(Simon, 2016, p.778)

*The occurrence of academic integrity violations appears to be surprisingly understudied in the field of mathematics, at least at the college level. From a student and even instructor perspective, mathematics can be seen as unchangeable in content and preoccupied with student mastery of algorithmic procedures.*

(Gilmore et al., 2016, p.734)

And that is it! As stakeholders, we (students and teachers) cannot deal with the elephant in the (class) room simply by shrugging our collective shoulders. Some of the other non-text disciplines are beginning to receive coverage in the literature. Computer science, in particular, has developed an extensive body of writing on **academic integrity**, the information otherwise available falling so wide of the mark. Simon et al. (2014) undertook a comparative study of perceptions regarding non-text (coding and visual design) tasks and essays, and recommended that context-specific issues be considered both in disciplinary processes and in education about academic integrity. For those who are not experts, it is difficult to appreciate how unlikely it is that certain subtle correspondences between students' work have arisen by chance (Roberts, 2002; Simon & Sheard, 2016). Just as different academic disciplines can have their signature pedagogies, they may have distinctive assessment tasks; this means that idiosyncratic forms of **academic misconduct** can arise (Borg, 2009), which overarching, generic university policies can barely address.

In the next section, we look at what we can abstract and apply to mathematics from what has been written about other disciplines.

## 1.3 Learning about maths from non-text disciplines

If you are a mathematician or mathematics student, at this point you might want to argue that the communication of mathematics in symbols organised in conventionally recognisable and meaningful structures is text, albeit text that is expressed in the symbols of a language not spoken in everyday conversation. But, as already mentioned, symbolically dense mathematical writings that address the same task can be highly similar (in contrast to written pieces in a natural language). Moreover, sketched diagrams are frequently required in mathematics – in a geometric argument, to illustrate the relationships between objects in a word problem, or to depict the properties of functions. Diagrams can help both the problem solver's thinking and the marker's assessment of it. Given that the conventional understandings of misconduct that are applied to prose text (or diagrams adapted from other sources) are of little use, we cast our net wider to find help from some surprising disciplines.

McGowan (2016) argues that showing someone how to do calculations similar to those required on an assignment is a form of working together, which can result in that other person then being able to do the actual assessable calculation independently, using understanding that they now possess for themselves. This is a reasonable description of the demand of mathematical tasks (as opposed to research for a prose essay or report), but it is still limited in application. It does not transfer to tasks such as constructing a proof, given that few proofs follow a template, and each requires at least one key, critical insight. This feature also arises when the question contains the 'answer' (such as those that begin with the familiar phrase 'Show that ...'). Addressing such a task is akin to constructing a legal argument. In a study of what he termed 'local plagiarisms', Borg (2009) noted the strong emphasis placed on individual student work (as opposed to **collaboration**) in law studies. His summary can almost be taken as a description of the purpose of a mathematics task:

*Much of the work at this level was both routine and critical. There was only one correct solution to the task, and each student had to demonstrate that they could – individually – find that solution. Discussion, as much as 'plagiarism', undermined that demonstration.*

(Borg, 2009, p.421)

Writing solutions to mathematical problems is, simultaneously, both creative and imitative. Undergraduates do not produce entirely new mathematics, but neither is mathematical understanding displayed by answering the same problem repeatedly, with just the numbers changed! One skill that universities seek to teach and assess is that of realising what existing or known components can be used in solving a particular problem, then combining them in a suitable way. This skill is also needed in computer science (Simon & Sheard, 2016), where code recycling and use of source-code libraries can be contested practices. You might be surprised to realise that a similar tension between novelty and imitation arises in fashion design, which makes visual and cultural references, or ‘invoke[s] a persona – whether athletic, formal or casual – based on a repertoire of existing models (i.e. both previously existing clothing and purposes to which they have been used)’ (Borg, 2009). The same is true of other design areas, such as architecture.

In the visual and performing arts, practices such as homage, pastiche, parody and appropriation are forms of legitimate practice (Porter, 2010), as they are in creative writing. Learning skills and understanding genre by copying existing works is standard, in much the same way as proving well-known results for and by oneself is part of learning to be a mathematician. There are conventional forms of expression to adopt. In the absence of any accepted referencing conventions for visual objects or performances, the main deterrents to crossing the line to **plagiarism** are pride in one’s own creativity and the associated desire to establish an independent artistic identity, together with scrutiny of work in progress or documentation such as sketchbooks. Valuing their own learning and achievement is one reason students give for why they do not plagiarise (Devlin & Gray, 2007).



‘WOMAN PAINTING IN MUSEUM’ FROM PXXHERE USED UNDER CC0

Bardini and Pierce (2015) have studied how the ability to read fluently and write meaningfully in its concise and symbol-based language (in contrast to mastery of concepts, which has been more frequently studied) affects students’ transition to tertiary maths. Thus, the literature concerning additional language acquisition becomes relevant. In a discussion of packing ideas into formal academic prose, McGowan (2005) pointed out that the instruction to ‘use your own words’ is not particularly useful until a student has developed sufficient word power; in mathematics, this would be adequate mastery of symbols.

Borg (2009) noted that although language lecturers agree that native speakers are a resource that can be consulted, they usually draw the line at such expert users correcting a learner's translation or composition. Similarly, asking a classmate to help debug computer code (the language understood by a machine) can seem quick and harmless when the bulk of it was individually written; this approach is common practice in a team-based workplace, but is potentially problematic in assessment (Joy, Cosma, Sinclair, & Yau, 2009). Students recognise this danger. In the study of Stepp and Simon (2011), students articulated questions such as 'What if the assistance reaches the point of improving the work beyond the capacity of the originator?' and 'What if the person who checks your work actually steals it?'. These are relevant considerations when students need help to improve the quality of their mathematical communication. What is appropriate does not necessarily go without saying (East, 2006). Having good model answers available is helpful, because all of us enrich our language by reading (McGowan, 2005); however, it is not used optimally if it results in slavish (and meaningless) **copying**, as observed in a study of the use of template reports in physics (Jones & Freeman, 2003).

## 1.4 Discussion and definitions of the behaviours

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Cheating, **copying**, **collusion**, patch-writing, questionable practices, learning dishonesty – there are many terms, some blunter than others, used to describe behaviour during assessment that damages individuals, professions and institutions. Frequently ‘**plagiarism**’ is used as an umbrella term, but this is potentially confusing since it has a particular meaning. In this book **academic misconduct** is used as the overarching term. (‘Cheating’ is another generic term that we do not use in the book, in part because it is used in the North American literature to refer more specifically to behaviour during in-class tests, and in popular parlance for infidelity; saying that someone has cheated is particularly fraught terminology.)

An important thing to note about the definitions that follow is that although they may invoke intentionality, none of them refer to reasons or justification for the behaviours. While that may affect the consequence (educative as opposed to some form of penalty), it does not change what they are.

### Plagiarism and copying

In this book, **plagiarism** should be taken to mean the use of another person’s words or ideas or diagrams that could have been attributed to that person to remove the misconduct. Generally, this is the work of a person not personally known to the user (Simon et al., 2014). It does not include asking or paying someone else to do an assignment (**contract cheating**), or copying from a classmate because, in those cases, acknowledging the source would not make such words acceptable. It is not necessarily helpful to refer to plagiarism as a form of theft (which implies depriving the owner of an object) or copyright infringement (which suggests financial harm) (Fishman, 2009). Educational training to prevent unintentional plagiarism often focuses on becoming familiar with the discipline’s referencing conventions, including when it is not possible to identify the original author (e.g. information on the internet), and on learning to paraphrase or summarise. (Note that plagiarism in mathematics research, including theses, is not an issue we consider here.)

**Self-plagiarism** occurs when you re-use your own words or ideas. Even though they originated with you, their re-submission may be inappropriate if fresh words are expected. Unless permission is obtained to submit work for which credit has already been given, the expectation is that what a student submits has been created expressly for the current task. (This is why the re-use of code in computer science, which is common industry practice, needs to be explicitly discussed in university assessment.)



**Copying** is used here to refer to the use of someone else's words (or calculations, code or diagrams) that can't be put down to poor attribution and is intentional – such as using published text or text from the internet verbatim, pasting in a diagram or using a classmate's work without their knowledge. Cosmetic modification does not make the work one's own. Being careless with one's work (e.g. leaving drafts lying around or in a bin in a public place, or not logging out of a computer when going to grab a coffee), so that it becomes available to be copied, is considered to be misconduct. **Patch-writing** is a form of copying that strings together phrases from multiple sources so that no one particular source is immediately identifiable.

In any act of **plagiarism** or copying, there are two actions (obtaining words or ideas, and presenting them for assessment), and three parties (the originator, the submitter and the assessor). The assessor always expects that the work is the product of the submitter only, unless it has been made clear that certain forms of **collaboration** are allowed. This may not be stated on each assignment sheet, but it is the default position (at La Trobe University and in academia generally).

A helpful visual representation of plagiarism or copying, adapted from Yeo (2006), is given below.

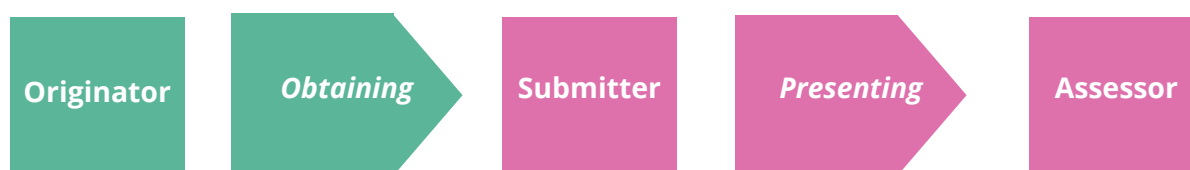


Figure 1 - Plagiarism or copying involves one more person (a separate originator) and one more action (obtaining that person's words) than the assessor permits.

\*THE PROCESS OF PLAGIARISM ADAPTED FROM YEO (2006) USED WITH PERMISSION

What about things that you do not need to look up? Can you just use them? What does, or does not, need attribution in written work depends on the accepted **common knowledge** for the discipline. Taught techniques in mathematics, such as those found in an undergraduate textbook or course notes, are not usually referenced. Yeo (2007) describes minimal or no need of referencing as a feature of assessment in most first-year science subjects. As Barrett and Cox (2005) point out, **collusion** is the more common problem in such disciplines: an easy trap to fall into, difficult to define, and often only coming to light when odd, incorrect or unusual similarities are noted.



## Collaboration and collusion

**Collaboration** means interacting in a way that is permitted. It is not misconduct. Collaborative forms of working in class are normally encouraged in modern pedagogy (an educational philosophy called socio-constructivism), and they develop skills in teamwork and communication. Even when assignments are intended to be done individually, general discussion of the topic is a permitted form of interaction. Collaboration has a positive connotation, whereas collusion is a negative term.

**Collusion** involves two or more persons interacting in a way that misrepresents to the assessor the understanding or contribution of the person who submits a piece of work, or misleads the assessor as to the origin of work. Permitting someone else to copy your work would be one example of collusion; enabling someone else's misconduct is still misconduct, even if the work you personally submit is your own. Correcting the mistakes in someone else's work, or asking someone to do this for you, is also collusion.

**Collusion** also includes students working together – on paper or whiteboards or through electronic exchanges – on specific aspects of a task that should have been completed individually, even if the contributions are more or less equal and they agree to share their work. Dividing up between people what should be an individual assignment is also collusion, as is to misrepresent in group work the contribution of an underperforming group member.

Barrett and Cox (2005) studied staff and student attitudes to collusion, and discovered that both groups found it to be harder to define, and somehow less ethically problematic, than **plagiarism**. Students felt there was a 'hazy line' (as they put it) between collaboration and collusion; staff felt there was some mitigation because 'at least they're learning'. Sutherland-Smith (2013) found that students called that same line 'thin' or 'mythical'; working in groups in class or on some assessments just continues naturally to other tasks. Learning together, helping one another, sharing – these are all good, right?

It may not be that simple. Scrimshire, Stone, Kisamore, and Jawahar (2017) found that students with the personality traits of desiring social connection (a high 'sociability' score) and being impulsive (a low 'prudence' score) are more often asked by other students to help them inappropriately. That is, when students engage in collusion, they target who they approach. However, Sutton and Taylor (2011) found that students could identify, and did actively practise, strategies that would protect them from collusion while still cooperating to a degree they felt comfortable with. (Some of these protective strategies are discussed in Chapter 3.)

It may be helpful to think of acceptable ways of learning together as being those that occur at a separate place or time from the production of work to be submitted for assessment, and in which each participant is responsible for their own note taking. However, as Barrett and Cox (2005) point out, there is no simple ‘one-size-fits-all-assessments’ way to distinguish the line between legitimate **collaboration** and **collusion**. As with **plagiarism**, it is possible for collusion to be unintentional if students do not reflect on what they are doing. That is why a discussion of realistic scenarios (such as those in Chapter 2) is so important.

The following diagram illustrates how, in **collusion**, the origin of the work submitted is unclear or misrepresented.

### COLLUDING

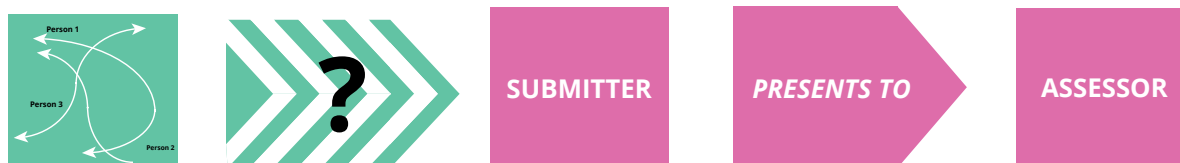


Figure 2 - In collusion, the origin of the work being submitted is unclear or misrepresented.

'THE PROCESS OF COLLUSION' BY KATHERINE SEATON

As in the plagiarism diagram, the assessor is part of the picture, and wants to assess the understanding of the individual, not a collective. The diagram also shows that not everyone involved in the collusion is necessarily required to submit the task. This definition follows that of McGowan (2016), which intentionally excludes reciprocity as being a required element of collusion, and thus includes other types of unauthorised assistance.

**Contract cheating** is used here as the term for a person asking someone else to produce part or all of the work submitted for an assessment task. Payment is frequently involved if the work is produced by a stranger, usually contacted online, but if a friend or relative produces the work as a favour, that is still called contract cheating. We also use this term when the submitter of the work did not directly request it, but nevertheless has obtained unfair advantage by using a relevant answer outsourced by someone else. Contract cheating cannot be explained away as general ‘help’; if someone does work for you that relates directly to an assessment task, this is a very serious form of misconduct and it attracts the most severe penalties.

The terms defined and discussed in this section are collected and summarised in the **Glossary**.

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# **Chapter 2**

## **The scenarios**

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## Scenario A

Aly is struggling with an individual assignment and knows that Miki has finished it. Aly asks Miki for help, and Miki gets out the finished work and shows it to Aly. Aly asks to make notes on a tablet and Miki, although not really happy about this, feels that saying no would be awkward.

After the assignments are marked, Miki gets a letter saying that the work submitted is very similar to another student's and that Miki has to write a response to an academic integrity adviser, then attend an interview.



\*TABLET AND NOTEBOOKS\* FROM PEXELS USED UNDER CCO

### INITIAL QUESTIONS FOR DISCUSSION

1. The work that Miki handed in is Miki's own work, so has Miki done anything that goes against the academic integrity rules?
2. Aly reasons that because Miki agreed to share the work with Aly, Aly cannot have done anything wrong. Is this correct?

### MORE INFORMATION

The work is actually similar because Aly used the tablet's camera to take a photo of the work while Miki was distracted. Aly could tell that Miki was uncomfortable and wanted to be quick. Aly then referred to Miki's work to finish the assignment.

### FURTHER QUESTIONS FOR DISCUSSION

3. Has Aly engaged in academic misconduct? If so, is it plagiarism, copying or collusion? (Note: it can be more than one of these.)
4. What could happen to Miki now?
5. In the final exam, do you think that Aly will be prepared for questions relating to the topic of this assignment?

## Scenario B

In a mathematics assignment worth only 5%, there is a question that assesses basic skills, including index laws and differentiation. Billi has a lot of other assignments due that are worth more marks, and knows that using an online maths tool will save time in completing the maths assignment and will guarantee the right answer. So Billi uses this tool to complete the assignment, putting in some steps and the correct answer. Billi does not get the assignment back with the rest of the class, and is asked to see the tutor privately. At that meeting, the tutor points out that the working Billi gave does not match the final correct answers.

### QUESTIONS FOR DISCUSSION

1. What do you think the purpose of the assignment is?
2. Will Billi get full marks?
3. What could happen next to Billi? Could Billi be referred for academic misconduct?
4. What is likely to happen when Billi has to use these skills in the technology-free exam (which is worth 60% of the subject's mark)?
5. Billi argues with the tutor that the answers are correct and that, since the work had to be completed at home, no one can prove or prevent the use of technology. What might the tutor do in response to this argument?
6. Billi explains (instead) about time pressures and having used CAS and other technology extensively in the past. What might the tutor do in response to this explanation?

## Scenario C

In practice classes and tutorials, students are encouraged to discuss the problems with other students sitting near them. Charlie sits with the same group for a few different subjects – they work well together and contribute fairly equally to the discussion. When it comes to their assignments, they use this same style of working, in a space in the library. They scribble ideas on bits of paper that are passed around or write them on a whiteboard, and they have a lot of fun. When Charlie hands in the assignments, there is a ‘student statement of responsibility’ to complete, which Charlie signs without a thought.

### INITIAL QUESTIONS FOR DISCUSSION

1. Is working together in class academic misconduct?
2. Have Charlie’s group of classmates collaborated on the assignments? Is this OK?
3. Have Charlie’s group of classmates colluded on the assignments? Is this OK?
4. One group member offers to write up notes from the discussion and from the whiteboard, and email it to the group. What should happen next?

### MORE INFORMATION

One of the normal group members, Yolli, is away for a few days, and asks to see Charlie’s notes made at one of these study sessions. Since Yolli always contributes to the discussions, and has a sick parent, Charlie is happy to help.

### FURTHER QUESTIONS FOR DISCUSSION

5. If Charlie provides the notes, is this wrong?
6. What could happen next to Charlie?

## Scenario D

Dannie finds that the standards for writing maths answers at university are very different from those at school. At school, only minimal working was expected, certainly not words or sentences, and Dannie does not really know when to use symbols such as  $\Leftrightarrow$ , which the school teacher never seemed to use. However, each class has model answers supplied for the problems covered, and so Dannie bases the responses for the assignment exactly on these. Dannie is astonished when a letter arrives, saying that the work submitted is almost identical to several other students', and is asked to explain.

### QUESTIONS FOR DISCUSSION

1. Has Dannie copied?
2. Has Dannie plagiarised?
3. What should Dannie do now?
4. What could happen to Dannie?
5. Going forward, what should Dannie do?

## Scenario E

Enzi hardly ever writes by hand anymore, and has become really good at directly typesetting technical work in a special editor. When a friend asks for help with an assignment, Enzi sits with this friend Nat, laptop open in front of them, and suggests Nat looks at the work, as this will be quick and easy for them both.

### INITIAL QUESTIONS FOR DISCUSSION

1. Has Nat done anything so far that goes against the academic integrity rules?
2. Has Enzi done anything so far that goes against the academic integrity rules?

### MORE INFORMATION

Nat asks if Enzi could email the file, just for another look, as they are both in a hurry; Enzi has to leave for work and Nat has a three-hour lab to get to. Enzi agrees; after all, Nat is a mate.

### FURTHER QUESTIONS FOR DISCUSSION

3. What could happen next?
4. The worst possible thing happens, as far as Enzi is concerned. Nat pastes parts of Enzi's work into a new document and submits it. Now what could happen next?
5. When it comes to questions on the same topic in the exam, which is all handwritten, is Enzi well prepared?
6. When it comes to questions on the same topic in the exam, is Nat well prepared?



## Scenario F

Two years ago, Fran's older cousin Perry did the subject that Fran is now doing. Perry gives Fran all the notes, including Perry's own assignments and the solutions provided back then. Fran soon realises that the same assignment questions are being used by this year's lecturer, and writes out solutions based closely on Perry's and the former lecturer's. Fran submits the solutions through the electronic portal, which requires Fran to click an authorship statement box upon submission.



'PAPER PILE' FROM PIXABAY USED UNDER CC0

### INITIAL QUESTIONS FOR DISCUSSION

1. Who, of Fran, Perry and the current lecturer, is not following the academic integrity guidelines?
2. What have they done, exactly? (Plagiarised, copied, colluded, enabled misconduct?)
3. What could happen next to Fran?
4. Suppose that Fran's tutor doesn't notice and gives Fran full marks. What is likely to happen to Fran in the final exam?

### MORE INFORMATION

The tutor becomes suspicious after the first assignment, and pays very careful attention to similarities when marking subsequent assignments. Fran's second assignment submission results in an academic misconduct investigation.

### A FURTHER QUESTION FOR DISCUSSION

5. What could happen to Perry? What if Perry has already graduated?

## Scenario G

Gul believes that Otta is more competent than Gul in one particular subject. Gul asks Otta to go through the answers on Gul's assignment before it is handed in, and point out any mistakes. Otta says no, but is willing to hear Gul explain the methods used. Gul thinks that Otta is showing off and trying to embarrass Gul, because Gul won't be as good at this as Otta would be.

### INITIAL QUESTIONS FOR DISCUSSION

1. Is Gul's request reasonable?
2. Is Otta's response reasonable?
3. What could Gul do instead?
4. What could Gul ask instead?
5. What could Otta offer instead?

### MORE INFORMATION

It turns out that, although Otta is more outwardly confident, and very articulate, Gul is just as good at the work or perhaps even better.

### A FURTHER QUESTION FOR DISCUSSION

6. What could happen if Gul does explain the methods Gul has used to Otta?

## Scenario H

Hani and Quin knew each other before uni, and they haven't made any new friends at uni yet. They are a bit overwhelmed and rely a lot on each other. In fact, they are inseparable. They do everything together, including attending or skipping the same lectures, and they do their assignments together. Their first assignments are identical, including the same errors, which no one else has made. Hani is happy enough at uni, but finds that Quin's mood is dragging them both down.

### INITIAL QUESTIONS FOR DISCUSSION

1. What could happen when the tutor sees the assignments?
2. What could Hani do next?
3. What could Quin do next?
4. What could happen as they move into the semester?

### MORE INFORMATION

Two months later, nothing much has changed and again their assignments are the same and contain identical but highly unusual errors.

### FURTHER QUESTIONS FOR DISCUSSION

5. What is likely to happen this time?
6. What is the most likely result for Hani and Quin for this subject?

## Scenario I

Ioni, Rohan and Sami have an idea to speed up their weekly assignments. They will divide the assignment into three parts, and each of them will work out how to do one of the parts. Two days before it is due, they will meet up and teach each other how to do their part. Then, each person will write up their own individual assignment, in their own handwriting.



'CELLPHONE SKYPE ON PHONE' BY TIRZAVAN DUK ON UNSPLASH

### INITIAL QUESTIONS FOR DISCUSSION

1. Is this academic misconduct? If so, what kind?
2. What dangers are there in this model of dividing up the workload?

### MORE INFORMATION

It turns out that Ioni can't meet the others physically, so they meet on Skype.

### ANOTHER QUESTION FOR DISCUSSION

3. Now what could go wrong?

### MORE INFORMATION

Rohan either couldn't or didn't prepare the nominated part, but can't let the others down. So Rohan posts the question to an online forum and gets an answer that Rohan shares with Ioni and Sami, instead of an explanation. Ioni is worried that Rohan's answer uses methods and language not familiar from the subject's classes, but doesn't have time now to look into it, so uses this answer.

### FURTHER QUESTIONS FOR DISCUSSION

4. Has Rohan committed academic misconduct?
5. Has Ioni committed academic misconduct?
6. What could happen next?
7. Will Ioni, Sami and Rohan be well prepared for an end-of-semester exam, which could potentially cover any topic from any task on the assignments?

## Scenario J

Jan likes subjects such as statistics, computing and maths, because they rely on using specific methods and the answers can be checked to be correct or not. Jan wants high marks, in order to get a job in innovation, developing cutting-edge new products, so right answers are what it is all about for Jan. Jan uses code from a code library in an assignment; the program compiles perfectly and gives the expected output. Jan tries changing some things like variable names in the code, but then it won't compile, so Jan submits the first version. The lecturer said not to copy from another student, but did not explicitly mention the use of code libraries. Jan submits the assignment through the university's learning management system (LMS), which requires Jan's assent to the authorship statement.

### QUESTIONS FOR DISCUSSION

1. What is the likely purpose of the assignment?
2. Has Jan done the right thing?
3. What could happen to Jan next?
4. What could happen to Jan at an interview with an academic integrity adviser?
5. Do you think Jan would be good at developing new products?



\*COMPUTER CODE CLOSE UP\* FROM PEXELS USED UNDER CC0

## Scenario K

Kit feels panicked – there is so much to do at uni and at home, and things are feeling pretty grim. Kit knows that other students take shortcuts. It is too late to withdraw from this semester's subjects without incurring a debt and a fail grade. Kit goes onto a website that comes up when Kit puts key words from the latest assignment into Google. Kit has to pay a small membership fee, but then gets unlimited access to homework solutions from many sources. Kit does not use them for this assignment, but does go back to the site for the next assignment. This second time, Kit finds a directly relevant solution on the website and incorporates it into the submitted work. Kit feels bad, but otherwise could fail.

### QUESTIONS FOR DISCUSSION

1. What could happen to Kit?
2. Has Kit paid for the material used in the second assignment?

### MORE INFORMATION

Kit gets a letter saying that academic misconduct is suspected, and is asked to submit an explanation in writing.

### FURTHER QUESTIONS FOR DISCUSSION

3. How could this have happened?
4. What is the likely result for Kit in this subject?
5. Could Kit be excluded from uni?
6. What could Kit have done differently?

## Scenario L

Lee needs to earn money to stay at uni. Lee tutors three students in the year below for payment. Tam, a friend of these three students, is in one of Lee's classes and offers to pay Lee for tutoring. Lee agrees, but then realises that Tam just wants answers to the assignments and not actual tutoring.

### QUESTIONS FOR DISCUSSION

1. Is it OK to tutor other students for money, if they are in a lower year?
2. Is it OK for Lee to tutor Tam, in a subject they do together, if it is not done for money?
3. What if Tam wants to pay?
4. What could Lee say to Tam?

### MORE INFORMATION

Lee helps Tam with the assignment, but not for money. Later, Tam does a better oral presentation than Lee – and in the end, they get the same mark for the subject. Then the three students that Lee tutors from the year below are asked for an interview with an academic integrity adviser, because their assignments are very similar.

### FURTHER QUESTIONS FOR DISCUSSION

5. What could happen to Lee?
6. Is it fair that Lee and Tam got the same mark?

## Scenario M

Moz is surprised to be asked to do a careful proof on an assignment, of what seems to be an obvious fact. Moz is unsure, though, how to set out a proof, and posts the question to an online forum. Someone replies straight away, saying that the proof is **common knowledge** and giving the answer. Moz writes the proof out by hand and submits it, signing the authorship statement.

### QUESTIONS FOR DISCUSSION

1. What is the point of being asked to do something obvious in a formal way?
2. Has Moz achieved the purpose of the question?
3. Has Moz breached the academic integrity guidelines?

### MORE INFORMATION

Moz is surprised not to get a good mark for the proof. The tutor explains that Moz has not used correct symbols. In fact, Moz has written ticks ✓ in place of square roots  $\sqrt{\phantom{x}}$ , and has written 'loge' instead of  $\log_e$ . The tutor is not convinced that Moz has understood what has been written.

### FURTHER QUESTIONS FOR DISCUSSION

4. How could this have happened?
5. Is this low mark fair?
6. What should Moz do?



## Scenario N

Some work that Nic did on an assignment last year is directly relevant to an assessment task in a different subject this year. Nic uses last year's work as the basis for this year's assignment, with some additions and modifications. Nic does ask another student if this will be OK, and is told 'Everyone always does that – it's your work'. Nic signs the student responsibility statement with no hesitation – of course all the work is Nic's, and you can't cheat off yourself!

### QUESTIONS FOR DISCUSSION

1. Has Nic received good advice?
2. What's the best source of advice regarding a subject?
3. Has Nic committed academic misconduct?
4. Nic is in third year. What could happen to Nic?

### MORE INFORMATION

Suppose instead that Nic dropped out of a subject due to ill health last year, and is repeating the subject. The work completed last time before dropping out is directly relevant again, and Nic can improve it because it was marked last time.

### A FURTHER QUESTION FOR DISCUSSION

5. Can Nic submit this work again?

## Scenario O

There is a classroom with whiteboards on all the walls, which students are welcome to use as a study space when it is not being used by a class. This classroom is popular with students, because they can work on the whiteboards as they do in pairs in class, more easily correcting errors they spot in their work than they can on paper. Olan sits down in this room to work on an assignment. Looking around, Olan notices that someone

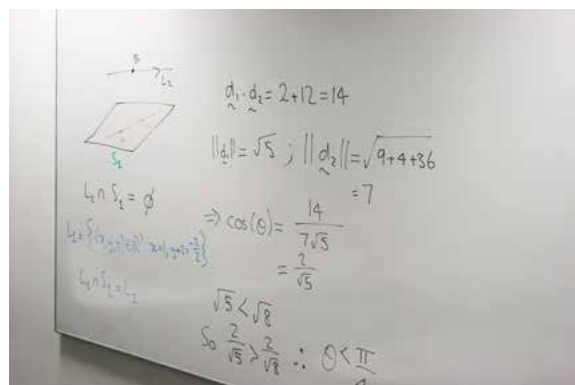


PHOTO BY JONATHAN NEWMAN USED WITH PERMISSION

has been there earlier on – all over the whiteboard are the worked solutions to the problems from the assignment. It is not possible to tell whose work it is, because it is a shared study space, sometimes used by staff for student help sessions. Olan is not sure what to do; after all, the teaching staff do help students with their work, and they know that students use the room for group and personal study, and it's not Olan's fault that someone left their work on the boards.

### QUESTIONS FOR DISCUSSION

1. If this were you, what would you do? Why?
2. Does using these solutions give Olan an unfair advantage?
3. What could go wrong if Olan uses these solutions?
4. Did the person who left their calculations on the whiteboards breach academic integrity guidelines?

## Scenario P

Pip and Tusi are really finding uni hard because, at school, the Year 12 coordinator checked up on them regularly. Pip's email isn't working and Tusi has never used an LMS before. They know the lectures are recorded and they finally watch the first lecture at the end of Week 2. They find out that an assignment on the first two weeks' work is due in Week 3! Pip goes to see the tutor on Monday morning and makes extensive notes, but Tusi has to go to work. Pip takes a photo of the notes and sends them to Tusi.

### QUESTIONS FOR DISCUSSION

1. What is the likely point of the assignment?
2. Is it OK for Pip to share the notes with Tusi?

### MORE INFORMATION

Tusi then shares the notes with Eli, but doesn't tell Pip. Pip and Eli (but not Tusi) get a letter, telling them that the lecturer suspects academic misconduct.

### FURTHER QUESTIONS FOR DISCUSSION

3. Has Tusi done anything wrong?
4. Has Eli done anything wrong?
5. What is the likely outcome for Pip, Tusi and Eli?
6. What do you think Pip and Tusi learned in the first three weeks of uni?

## Scenario Q

Quentin has an Excel assignment to do, but has missed a bit of uni lately and needs some tutorial materials that a friend has. The friend lends Quentin a USB with the materials on it. Quentin opens a spreadsheet labelled with the date, but it is the friend's assignment, not the class material. Quentin knows that someone else copied a friend's assignment and it seemed as though nothing happened as a result – the lecturer either didn't care or didn't notice. Quentin copies the file, changes the order of some columns and the column headings, and then submits it.

### QUESTIONS FOR DISCUSSION

1. Has Quentin's friend followed the academic integrity guidelines?
2. Do you think that students who receive academic misconduct penalties spread this news around?

### MORE INFORMATION

The lecturer asks Quentin to explain one of the formulas used in the spreadsheet, saying that it is a non-standard method.

### FURTHER QUESTIONS FOR DISCUSSION

3. Do you think that Quentin can explain the spreadsheet formula?
4. What could happen to Quentin?

## Scenario R

Ru has done a series of calculations on an assignment. Ru's friends have asked each other what methods they used, and they all agree about them. However, the final question asks, 'Hence explain in your own words why the curve found in part (d) is called the parabola of safety'. Ru googles 'parabola of safety' and finds out that the definition of parabola of safety is the 'envelope of ballistic trajectories'. This definition, from Wikipedia, uses language not used in the subject and, although Ru does not understand it, Ru thinks that the lecturer will be impressed with its technicality.

### QUESTIONS FOR DISCUSSION

1. Is talking about methods with friends, as described above, academic misconduct?
2. Is it academic misconduct to google an unfamiliar term?
3. Has Ru answered the final question?
4. Has Ru achieved the intention of the final question?
5. What is the likely result for Ru on this assignment?

## Scenario S

Steen is running late for work and asks Jools to hand in an assignment, which has to be put in a pigeonhole on the other side of campus. Jools notices that Steen has included something in the assignment that Jools didn't think of. Since the latest possible submission time is in about an hour, Jools has time to write a new response to one part of the assignment, based on Steen's answer. The assignments are marked to a rubric or standard (not adjusted to lie 'on the curve') so Steen's mark will not go down. Jools figures that no one is getting hurt.

### QUESTIONS FOR DISCUSSION

1. Has Jools broken the academic integrity guidelines?
2. Has Steen broken the academic integrity guidelines?
3. What should Steen have done?
4. What is Jools' behaviour called? (Collusion, plagiarism, collaboration or copying?)
5. What could happen to both Steen and Jools when the tutor sees the work?
6. What are the longer-term likely outcomes for Jools?



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## Scenario T

There are standard libraries of data that are freely available for a variety of educational and research purposes. For a coursework assignment, Tip needs to locate a specified dataset and perform particular statistical analyses on it. When Tip googles the dataset, what comes up is not only a link to the dataset, but also links to some of the research papers that have used it, and links to assignments from other universities as well. Tip browses through them, and realises that the analyses being asked for have been done numerous times on this data and, with one more click of the mouse, the results of the analyses are on the screen! Tip is annoyed at being asked to do something for which the results are so well established, and therefore puts minimal work into the assignment, making extensive use of some of the analyses found as a result of the search.

### QUESTIONS FOR DISCUSSION

1. Why do you think Tip and the rest of the class are being asked to do analyses that have been done before?
2. Is it OK to google aspects of an assigned task, as Tip has done?
3. Is it OK for Tip to use the results of the search in the assignment submission? What if Tip attributes them?

### MORE INFORMATION

Tip thinks that it would not be appropriate to use the published analyses in preparing the assignment submission, because this work clearly belongs to someone else. However, copies of assignment answers from other universities seem like a grey area – the work is out there on the internet visible to anyone, but not attributed.

### FURTHER QUESTIONS FOR DISCUSSION

4. Does Tip have this the right way around? Does it matter whose work you consulted, and whether it can be identified?
5. What should Tip do in a confusing or frustrating situation like this?

## Scenario U

Uda knows that Zan is more confident than Uda in one particular subject. Uda asks Zan to go through Uda's assignment answers before they are handed in, and point out any mistakes. Zan says no, and just wants to tell Uda the answers. Uda thinks Zan is showing off but, since Uda is the one who needs help, Uda feels there is no choice but to agree. Uda uses the answers and tries to work backwards towards the question.

### QUESTIONS FOR DISCUSSION

1. Is Uda's request reasonable?
2. Is Zan's response reasonable?
3. What could Uda do instead?
4. What could Zan offer instead?
5. Has anyone committed academic misconduct?
6. What could happen to Uda next?



## Scenario V

Vee creates a private Facebook group for each assignment, and invites other students from the class to join. They post links to useful videos they have found and to highlighted parts of the course materials relating to particular items on the assignment.

### QUESTION FOR DISCUSSION

1. Is this academic misconduct?

### MORE INFORMATION

Alex accidentally posts a link to Alex's own assignment answers, instead of the resource intended. Vee quickly alerts Alex and deletes the link, but not before two other students access the file. Alex changes all the parts of the answers that can be changed, such as the wording of the written explanations and the names of variables, before submitting the assignment.

The other two students face an academic misconduct investigation because their work is too similar to each other's. They reveal Vee's role as the one who set up the private Facebook group and identify Alex's work as the source for their common answers.

### FURTHER QUESTIONS FOR DISCUSSION

2. Who has broken the academic misconduct rules?
3. What could happen to Vee?
4. What could happen to Alex?
5. Unfortunately, back in first year, Alex was warned for academic misconduct in another subject due to poor referencing. Does this change your answer to the previous question?

## Scenario W

Win has no idea what the statistics assignment question means. Win asks a classmate, but this person refuses to help Win at all, saying that it is an individual assignment and they cannot talk about it. Win posts the question to an online discussion forum and someone posts a reply, breaking the question down and explaining it.

### QUESTIONS FOR DISCUSSION

1. Is the classmate correct?
2. Is posting the question to a free forum OK?
3. What could Win do instead?

### MORE INFORMATION

Win checks the forum again the next day. Another person has actually answered the question, rather than just explaining it.

### A FURTHER QUESTION FOR DISCUSSION

4. Would it be academic misconduct to use this answer?

### MORE INFORMATION

Win writes up the assignment, modifying the answer provided on the forum, because the intention was really to do the work. Two other students are lurking in the forum and they use this answer. These other two students and Win are all asked to see an academic integrity adviser.

### A FURTHER QUESTION FOR DISCUSSION

5. What could happen next?

### MORE INFORMATION

It turns out that the answer was written by a person who hangs around these forums, and posts plausible, but incorrect, answers out of outrage that cheating online is so easy! Win's actions, and those of the other students, have come into question because they contain similar errors.

### A FINAL QUESTION FOR DISCUSSION

6. Has Win achieved the purpose of the assignment?

## Scenario X

Xanda finds a diagram that is perfect for an assignment solution. Xanda scans the image and incorporates it into the assignment. The assignment runs through text-matching software and shows no issues. Later, Xanda is sent a letter saying that the assignment appears to contain the work of another person without attribution.

### QUESTIONS FOR DISCUSSION

1. In a subject where text-matching software is used, what rules apply to non-text material?
2. In a subject where text-matching software cannot be used, what rules apply to diagrams?
3. If Xanda found the image in a book or a journal, what could Xanda have done?
4. If Xanda found the image online, could Xanda use it?
5. If Xanda found the image on a printout in a recycling bin near a printer or scanner on campus, could Xanda use it?
6. If Xanda found the image on a USB left in a computer in a learning space, could Xanda use it?
7. If Xanda re-drew the diagram and then incorporated it, would Xanda need to supply attribution?

## Scenario Y

Big expectations are riding on Yve's success at uni. Yve joins a study group, whose members work together a lot. Yve really relies on this group, and their editing of some of Yve's work to make it clearer and to correct the use of symbols. Yve feels that things are going quite well, and the assignment marks that Yve is getting back this up. Yve looks back over these assignments in preparing for the exam. However, the exam is a nasty shock. The questions seem sort of familiar, but even so, they are confusing. Yve can't get the ideas to come out on paper, and fails the subject.

### QUESTIONS FOR DISCUSSION

1. What are the possible dangers of relying on a group?
2. Is it OK to let someone else edit your individual work?
3. What is the likely purpose of the assignments?
4. What could Yve have done differently?
5. Yve's behaviour has not resulted in an academic misconduct investigation, but has it helped Yve?

## Scenario Z

Zsa and some friends are doing a laboratory class, in which they have to get their code signed off in stages, during the class. When one of them, Oki, is signed off, Oki then emails the code to all the others in the group of friends, so that they can be signed off, too. They use personal Gmail addresses, not their student email accounts. When Zsa goes to be signed off, the demonstrator asks Zsa a question about the code, and what a particular line in it will do. Zsa cannot answer. The demonstrator notices the Gmail tab at the bottom of the computer screen and asks Zsa to open it. The email is from Oki, and is clearly labelled with the question items. The demonstrator takes a photo of the email open on the screen.

### QUESTIONS FOR DISCUSSION

1. Why do you think that Zsa and Oki and the others do this?
2. Is this group of students achieving the point of the lab?
3. What kind of misconduct is this?
4. What could happen to Oki?
5. What could happen to Zsa?

## Scenario VL

Etomer is astonished at what is in the LMS forum. Someone has logged in as the student Onlin, a student who posts regularly in the forum, but has written “I am not Onlin. I have been doing their posts and quizzes all semester and have not been paid what was agreed.” The post disappears shortly afterwards, but not before someone took a screenshot and posted it to social media. Etomer has never met any classmates in real life, because this subject is offered with flexible and asynchronous alternatives.

### QUESTIONS FOR DISCUSSION:

1. What is the most likely explanation for the situation? What is this called?
2. Apart from academic integrity rules, have other university rules been broken?

### MORE INFORMATION:

The lecturer draws the attention of the class to online educative materials about academic integrity and to university policies not only about academic misconduct but also responsible use of computer facilities, and copyright. They are reminded that if they did not complete the academic integrity training at the start of semester, that they should do so.

Etomer previously shared course materials on a peer-to-peer file sharing site, as well as some marked assignments and screen shots of questions taken during an online exam. The site encouraged upload to help other students and to obtain greater access to what other students were sharing, and to online tutors, without paying a fee. Etomer also got access to an online maths problem solver through this website. Up to now, Etomer has not actually needed to use materials shared by other students and has not accessed the tutorial service. Previously Etomer assumed that because no money changed hands, this was not contract cheating, and that the materials were OK to share or the site would have rejected them. But having read the educative materials more carefully, doubts creep in.

### MORE QUESTIONS FOR DISCUSSION:

3. Was Etomer correct that posting course-related materials to external file-sharing sites is not a form of academic misconduct?
4. Who owns the copyright in university teaching materials?
5. What should Etomer do now?

## Scenario XIX

Accessing materials online without the hassle of the commute seemed really flexible at first. But with lots of people all at home, getting the peace and quiet and structure to really get on with study has been hard, and the others need support and help with things all day long. Now Divoc realises that there's a lot to do before even starting the next assessment task, to prepare for it adequately, and the days have somehow all blurred into one, and it is due in just two days. Divoc really needs help, and absent-mindedly types "maths assignment help" into the phone search engine, while watching a lecture recording on the laptop. There are lots of sites offering help, and one of them has photos of students wearing hoodies which have a logo like the one of the uni that Divoc is enrolled at! Divoc follows links at a few of the sites and ends up finding someone who will do the assignment for a payment, and who promises a good grade. According to the site, this person has glowing ratings from many students. Not exactly the help Divoc was looking for originally, but perhaps one time-saver like this, and then Divoc can get back on top of things. Divoc does order the assignment, receives it in time and submits it. These are unusual circumstances for anyone to find themselves in.

### QUESTIONS FOR DISCUSSION:

1. If Divoc pays someone to do the assignment, what is this called? What if Divoc's uncle, say, did the assignment without asking for money?
2. Given the nature of the business they are in, should Divoc trust the claims of the website?
3. What could happen next?

### MORE INFORMATION:

In due course, the work is marked, and Divoc is not happy with the feedback received. The problems don't get good marks at all. There was a question asking Divoc to suggest an application, and apparently the application is too simplistic. Divoc decides not to pay. But then Divoc gets a message from the website saying that they will report him to the uni unless the payment is made.

### QUESTIONS FOR FURTHER DISCUSSION:

4. Suppose Divoc pays now. What is there to stop them asking for more payment?
5. Divoc has lost a lot of sleep over this, and now there is another assignment looming! Is Divoc back on top of things, and well-prepared for this next task?
6. What could Divoc have done differently at the beginning? What about now?

## Scenario XL

Pan shares a house with two others. Pan can't always seem to manage to access help from uni when it's available, and starts to worry about all the assignments that will soon be due. Antine suggests that Pan posts them to Chuberlogg, which Antine does, saving lots of time and hassle. Antine says it's like getting help from a tutor or friend. Iso, their other housemate scoffs at this idea. Iso is an amateur sports player, and says that saving time by not actually doing the assignments is like catching a taxi and telling the coach you did a 5km run. It's not about the destination, it's the process.

### QUESTIONS FOR DISCUSSION

1. What does University policy call the time-saver that Antine is suggesting?
2. Is it always OK to get help from a friend or private tutor with an assignment as Antine says?
3. What is the purpose of assessment? What is the purpose of going to uni?

### MORE INFORMATION:

Iso again tries to talk Pan out of using Chuberlogg, saying it's more like getting someone else to wear your fitbit, and kidding yourself you did the steps. You won't be match ready. Or ordering a meal to be delivered and telling your date it's homecooked by you. Antine and Iso have a huge fight about it, and Iso moves out. The rent share goes up, Pan tries to pick up some more work shifts, and things get even worse in terms of time pressures. A few weeks later both Pan and Antine are investigated for contract cheating.

### FURTHER QUESTIONS FOR DISCUSSION

4. Are Iso's descriptions of using "Chuberlogg" good ones?
5. Why might Pan and Antine have been suspected of outsourcing?
6. What could happen to Pan and Antine, if they are found to have outsourced assessment tasks?
7. What could Pan have done instead?
8. Suppose that they were not investigated, but they had taken such a shortcut. How prepared would they be for future assessment? Or for their careers?



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# **Chapter 3**

## **Issues raised by the scenarios**

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## Scenario A

Peer or social pressure is a factor that can cause students to agree to things they are not entirely comfortable with, such as showing their work to another student (Simon & Sheard, 2015). Also, when asking for inappropriate help, students are more likely to ask a friend who is impulsive, than someone cautious who they know less well (Scrimshire et al., 2017). Nevertheless, all students are required to take reasonable precautions to ensure that **copying** of their work cannot happen, whether knowingly or carelessly. As a guide, if Miki's assessable work is open in front of another student, that is not **collaboration**, it is **collusion**. **Academic integrity** relates to a relationship between three parties, not just two; the third party is the assessor, who has not agreed that the work can be jointly produced and who is being deceived about its origins (Yeo, 2006). As the further information for this scenario shows, Aly went even further than collusion (without Miki's knowledge), and engaged in copying, using technology to make an electronic copy. **Plagiarism** refers to passing off someone else's ideas as one's own without correct attribution, but attributing the work to Miki would not have corrected the breach of integrity.

Miki is probably the better-prepared student for future assessment. Studies show that students achieve better overall outcomes if they focus on learning, rather than on getting marks or having correct answers by whatever means (Ashworth et al., 1997; Palazzo, Lee, Warnakulasooriya, & Pritchard, 2010).

## Scenario B

The purpose of the assignment appears to be to diagnose whether students can reliably perform certain fundamental mathematical tasks, which they will need to do in the final technology-free exam; that is, it is formative or diagnostic assessment. Billi has not taken up this learning opportunity and does not seem to understand the purpose of the task; perhaps it has not been clearly explained (Bretag et al., 2018; Fraser, 2014). By making up working, Billi has attempted to mislead the assessor; however, there is no actual reportable misconduct in this scenario. The tutor probably wants to alert Billi to the need to take advantage of learning opportunities, and of what is needed in terms of skills going forward. If Billi explains about time pressure and not being sure about differences between previous and current expectations – two common reasons for students to take shortcuts (Ashworth et al., 1997; East, 2006) – the tutor will be able to point Billi to some resources or student services that could help. Mutually respectful relationships with teaching staff lead to lower incidences of student misconduct (Bretag et al., 2018). If Billi is arrogant about the behaviour (Devlin & Gray, 2007), this is not constructive (Riedesel et al., 2012) and the advice Billi needs may not be received.

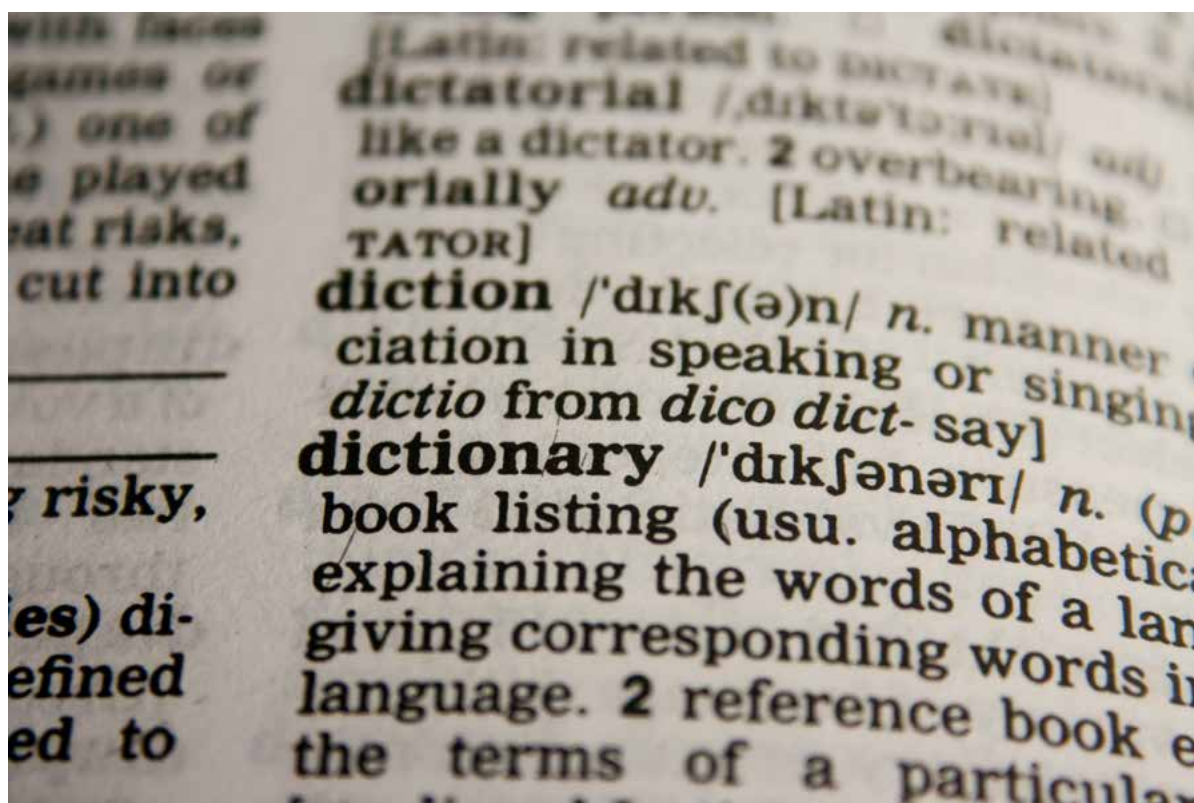
## Scenario C

Working together cooperatively or collaboratively in class is encouraged, but this has muddied the water about expectations when it comes to individual assessment (Barrett & Cox, 2005; Simon & Sheard, 2015; Sutherland-Smith, 2013). Students who would never copy another student's work in an exam may not think twice about what happens when they are doing homework or assignments (Ashworth et al., 1997). In principle, study groups are a good thing. Whether Charlie and the other students in this scenario have colluded will depend on what they are actually writing down. For example, if they are writing down things like 'this looks like the example from last Thursday' or 'try method X for this one', then they are collaborating (McGowan, 2016). However, if one of them starts to write down and share specific details of an answer, then the door for **copying** and **collusion** is opened. As a rule of thumb, talking is generally OK, but once work is open in front of other students and notes are being made from it, the line is being crossed. If each student makes their own notes from a group discussion, direct copying can't happen.

In the second part of this scenario, the matter of altruism or loyalty to peers comes up. Students frequently regard being helpful, especially when things are tough, as a higher good than the abstract principle of **academic integrity** (Ashworth et al., 1997; McGowan, 2016; Scrimshire et al., 2017; Sheard & Dick, 2012). Getting notes from friends is not the only way to get support. Yolli could ask for an extension and for help from the lecturer or tutor. The worst-case scenario is that Yolli uses Charlie's notes inappropriately, in which case Charlie could end up involved in a misconduct investigation. This might have serious consequences for both Yolli and Charlie, as well as for their friendship and engagement with other students (Sutherland-Smith, 2013). 'It's not my fault how it got used' is not an acceptable defence once your work is shown to someone else.

## Scenario D

Dannie seems to have used the provided answers a little too closely; they are models and are indicative of the expected standard, not a proforma (Jones & Freeman, 2003). When responding to the letter, Dannie can explain the huge adjustment that is underway, and that it is the provided answers, rather than other students' work, that have been consulted. Instances of similar work early in first year generally result in counselling and advice, rather than penalty, as Dannie will find by reading the relevant policies. Dannie has not copied or plagiarised, in the way that these terms are understood in the **academic integrity** policy (or as defined in Chapter 1 or the Glossary). Learning the style and vocabulary of mathematical communication is like learning an additional language (Bardini & Pierce, 2015), and referring to model answers is a good way to develop an understanding of how to write in this new language (East, 2006). Over time, Dannie must develop fluency, and along the way may make mistakes (as one makes when speaking a language one is learning). Lack of confidence or fear of errors is a documented explanation for why students do not use their own words (McGowan, 2005). It is also possible (although the scenario does not specify this) that Dannie has used symbols or phrases from the model answers that do not apply to the assigned work; this is described as occurring in physics reports by Jones and Freeman (2003). The scenario indicates that there is learning to be done, and perhaps that Dannie needs to ask for help with some things not yet understood.



'DICTIONARY DEFINITION' FROM PEXELS, USED UNDER CC0

## Scenario E

Asking a friend for help, as Nat has done, is not wrong in itself. If Enzi had talked about the work in general terms, that would be fine. However, showing someone else your typeset work is not appropriate, because the expectation is that students will not knowingly make **copying** possible. As this scenario indicates, sharing electronic work is very easy, and time and workload pressures make shortcuts tempting (Franklyn-Stokes & Newstead, 1995). However, once a file is shared, the originator loses control over how it is used or misused. Nat and Enzi have each breached the academic integrity policy, and there is both **collusion** and copying in this scenario. Nat and Enzi's friendship is likely to be badly damaged by the ensuing investigation (Sutherland-Smith, 2013).

Since exams are handwritten, Enzi should maintain that skill, which is somewhat different from typesetting (with spellchecking and the possibility to quickly undo errors). Some students report not actually being able to write quickly for the whole of the allotted time! Typesetting mathematics is time-consuming and adds to the load of what has to be learned, and thus is generally not required in first or second year. The expectation is that study time will be spent on coming to grips with the content (Rowlett, 2014). Had Enzi handwritten this assignment, this e-sharing would not have happened. Nat has certainly not prepared well for the final assessment by pasting work from another student into the assignment, rather than doing it individually; in this respect, Enzi is better prepared. A published study showed that students who cheat on (physics) coursework problems perform significantly worse on the final exam than students with similar prior knowledge who do not cheat (Palazzo et al., 2010).

## Scenario F

University **academic integrity** policy requires staff and students to take actions that will reduce the possibility for misconduct, which includes lecturers varying the assessment tasks from year to year. Cynicism about lecturers' level of care, both in designing assessment and deterring misconduct, is a justification that students give for their misconduct (Ashworth et al., 1997; Simon & Sheard, 2015). All three people in this scenario may be breaching the guidelines. Both the lecturer and Perry are making misconduct possible, and Perry may also be colluding (but this is unclear, because Perry may not have known that the former assignments would be directly relevant). Fran is **copying**, and this would not be considered **plagiarism**, because correct attribution would not rectify the conduct.

It is possible that Fran will be asked to explain the assignment's similarity to other students' work; after all, the answers were quite easy to get hold of and others may have them, too. Fran will not have engaged in the kind of learning activities that were intended, and that would help prepare for the final exam, so Fran may not do well in it (Palazzo et al., 2010).

Universities have revoked degrees where they believe that they were not properly obtained; this does not seem to apply in this scenario, because there is no evidence to indicate that Perry engaged in misconduct as a student. Some authors would suggest, however, that Perry has undermined the assessment, thus damaging the academic enterprise and the value of Perry's own degree (Dick et al., 2003; Fishman, 2009).

## Scenario G

By asking Otta to correct mistakes in Gul's work, Gul is asking Otta to contribute to it and thus engage in **collusion** (McGowan, 2016). On first glance, Otta may be displaying the kind of pride that Devlin and Gray (2007) identified as sometimes giving rise to an arrogant form of misconduct. Or Otta's response may not be showing off; Otta may be clumsily trying to find an appropriate way to help without doing the wrong thing (Sutton & Taylor, 2011). Gul could ask Otta to have a more general chat about the assignment, or could seek help from the lecturer or tutor. Otta could have suggested either of these things, or mentioned helpful resources to focus on.

Just because a student appears confident, it does not mean they have all the answers. Similarly, just because a student is having to work really hard, it does not mean they are not making progress; learning new things can be hard. In fact, in the twist at the end of this scenario, it seems that Gul could be taken advantage of, if Otta finds out what Gul's hard-won ideas are (Stepp & Simon, 2011). Gul could take Otta's strange suggestion as a warning not to trust Otta. Breaking trust with fellow students was considered (by students) to be more serious than the breach of an abstract 'right' and 'wrong' in the study of Ashworth et al. (1997).



## Scenario H

In some disciplines, particularly those involving calculations, what alerts tutors that **copying** or **collusion** is occurring is pairs or clusters of students with identical and unusual errors (Simon, 2016). As students new to university study, Hani and Quin will probably get a warning about their work being too similar, along with academic counselling, which will give them a chance to talk to someone about their transition to uni and their academic difficulties. Hani and Quin need to ask for help when they each need it, and become more independent, both in writing up their answers and in general. Joining a club or extending their circle of friends in some other way would be good for them both. It seems that Quin may need some more help in adjusting to uni, such as counselling. Universities have such help available.

A subsequent instance of misconduct is not dealt with by warnings and counselling. Penalties begin to be imposed; generally, penalties are reduced marks or zero marks for items of work. Coupled with the fact that Hani and Quin are still making identical idiosyncratic errors (which suggests they are not accessing reliable help), their outlook in this subject is not good.



"TWO SHEEP" FROM PXHERE USED UNDER CC0



## Scenario I

There is certainly a danger that Ioni, Rohan and Sami could be colluding, or even **copying**. This will depend on exactly what happens when they meet up to ‘teach’ each other. Explaining ideas to other students can be a great way to learn the material yourself and to test the completeness of your understanding (Alcock, 2013). But if the three students are actually showing one other exactly how to do the assigned questions, then this is certainly misconduct (McGowan, 2016). Even if they manage to speak in general terms, and resist the temptation to write out the solutions in front of each other, the risk is that one of them will not do their share, and leave the others with time pressures in meeting the deadline for the assignment. Time pressures contribute to misconduct (Franklyn-Stokes & Newstead, 1995). The possibility for the kind of idiosyncratic errors and uneven quality that trigger academic concerns about **collusion** or copying is very high (Simon, 2016).

Once the communication becomes captured by technology, the possibility for copying is increased. For example, screenshots or a recording from a Skype meeting could easily be made without the consent or knowledge of the other participants. Those participants would still have contributed to misconduct, because they have made copying possible through carelessness.

In the second part of the scenario, by outsourcing the problem to an online forum, even if there is no charge, Rohan has breached the **academic integrity** guidelines. Since specific help for an assessment task has been obtained, this is **contract cheating** (Bretag et al., 2018). The later part of the scenario makes it clear that what is going on is not ‘teaching’, but collusion and copying. Over-sophisticated language, and the incorporation of ideas beyond the scope of the student’s expected knowledge for the subject, again raise flags of concern for the person marking the assignment (Dick et al., 2003). Ioni, Rohan and Sami could well be asked to respond to a report of suspected misconduct, and receive a penalty (e.g. zero for one or all assignments) if it is found that they have colluded. If contract cheating is found to have taken place, exclusion from the university is a possible penalty. Asking students to explain submitted work is a way that lecturers check whether the student actually produced it (Simon & Sheard, 2016). If these students do not fully understand the questions taught to them by the others, then they will not have used the assignments formatively as a way to prepare for the final assessment, which is generally the purpose of low-stakes work assigned during the semester. The purpose of assessment is not handing in a correct set of solutions; it is demonstrating one’s own understanding and mastery of the topic (Fraser, 2014; Yeo, 2007).

## Scenario J

The purpose of asking students to do simple or routine tasks for themselves, even though the answers can be looked up, is to make sure they can ‘walk before they run’, as part of their development of skills. The fact that Jan thought it was necessary to modify the code indicates that Jan suspected it was not appropriate to use it; this is not open and honest behaviour (Riedesel et al., 2012). The fact that Jan can’t successfully modify simple aspects of the code indicates poor understanding of how it works. Code-similarity detection software (e.g. MOSS – measure of software similarity) is routinely used for programming assignments, rather than text-matching software (such as Turnitin) and, by giving assent to the authorship statement, Jan has given consent for the work to be checked electronically. What will happen following an interview with an academic integrity adviser will depend on Jan’s level of experience – whether this is the first assignment in first year, or a large item in a later year. It is possible that Jan needs only a warning and an explanation of what is expected going forward. At this point, Jan’s behaviour does not indicate the deep level of understanding of basic principles that is required to become independent and innovative in product design. Jan should focus on learning and understanding, not simply on getting high marks (Palazzo et al., 2010). When Jan is in doubt, either about a task or whether an action is permitted, asking the lecturer is the best course of action.

## Scenario K

Kit is experiencing many of the time and financial pressures that students give as reasons for resorting to **academic misconduct** (Franklyn-Stokes & Newstead, 1995). Students also use their perception that their classmates take proscribed shortcuts to justify such behaviour. Kit could certainly be found to have committed **contract cheating**, by using specifically relevant material from a site with a membership fee (Bretag et al., 2018). The timeline of exactly when the fee was paid does not change this fact, nor does the fact that someone else has requested (contracted) this particular solution. Kit's conduct may have come to light because other students are using the same website, giving rise to a similarity match, or the lecturer may have also accessed it. Universities monitor such sites, both to see whether their copyrighted materials are being uploaded and to see whether solutions to their assignment questions are being posted (O'Malley & Roberts, 2012). Kit could have requested an extension, or asked a tutor for help. If Kit felt overwhelmed, there are other services available, such as study skills or counselling. Even withdrawing late from one subject may have been a wiser decision than the one Kit made. Receiving zero for a subject, or suspension or exclusion, are possible penalties for major misconduct.



'BUOY LAUNCHED AT SEA' BY JAMETLENE RESKP ON UNSPASH

## Scenario L

Tutoring for payment, when it is actually teaching and does not involve writing answers for students to submit, is fine. Being paid by a classmate to show them answers to assessment tasks is not – it would be **contract cheating** by both parties, whatever they chose to call it (Bretag et al., 2018). Tam may be taking advantage of Lee's difficult financial situation (Devlin & Gray, 2007), but this would not exonerate Lee. Lee could point out what help is available from the uni, offer Tam the chance to join a cooperative study group, or offer to explain the general ideas that Tam is struggling with (which seems to be what happens). This could fairly result in them both getting the same mark, because they have different strengths. Perhaps Tam could give Lee tips about oral presentation, and thus they could be helping each other. Or Lee could choose not to get involved with Tam (Sutton & Taylor, 2011). Lee feeling social pressure, because Tam knows Lee's other students, is not a good enough reason to do something Lee does not want to do (Ashworth et al., 1997).

If Lee's three students produce work that is similar enough to trigger an academic progress hearing, this may be because they work together (collude) at other times, without Lee. On the other hand, if it is found that Lee provided them with solutions, even though Lee is not being assessed for that task, Lee could be found to have committed **academic misconduct**. Since Lee is not actually enrolled for that subject, mark reduction is not possible, and Lee's penalty would have to be drawn from other possible penalties in the schedule. If Lee is found to have been the contracted party in contract cheating, as a student of the same university, Lee could be excluded.

## Scenario M

The purpose of being asked to set out a formal argument for a simple result was probably to learn how to do a proof, beginning with a simple one, the intent being for Moz to develop skills in that area (Alcock, 2013). Misconduct includes presenting the words or ideas of others when there is the expectation that the words or ideas should be one's own. So yes, by using an answer provided in an online forum, even if the answer was not directly requested, Moz has missed out on developing essential reasoning skills (Borg, 2009) and has breached the **academic misconduct** guidelines. This is **contract cheating**, because the work was done by a third party, seemingly as a favour (Bretag et al., 2018).

Typesetting mathematics, particularly online, is not straightforward, so details such as subscripts and special symbols can be missing or garbled. If Moz had understood the mathematics, the proof would not have contained these tell-tale errors. These types of flag-raising mistakes, which indicate poor understanding and suggest **copying**, can also arise when students base their work on other students' handwritten work. A low mark is a fair reflection of Moz's learning, and if the tutor finds evidence of Moz's interaction in the online forum the mark could be reduced to zero, or a worse penalty may be imposed.

The best places to start looking for help, or to ask any question about an assessment task, are with the teaching staff of the subject and in the subject resources. Moz still needs to develop the skills from this assignment, and to develop better learning strategies.

## Scenario N

Although the work and ideas are Nic's, credit has already been given for them in Nic's degree. University policy requires students to check with the subject coordinator whether it is permissible to re-use work completed for another subject. Asking other students what they think, or relying on 'common sense', is not the best way to establish what is allowed; it may or may not be. Nic should carefully read the statement that must be signed with the submitted work, and the policy. Text-matching software will identify matches to any student's previously submitted work, including **self-plagiarism**, so Nic could well find that an explanation for potential misconduct will be required. Responsibility lies with the student, and students in the later years of a degree are generally expected to have a deeper understanding of **academic integrity** than students submitting their first pieces of work or new to the Australian university context. Thus, the fact that Nic is in third year would influence any decision made about this conduct. Not knowing, or not having thought to ask, is not behaviour consistent with Nic's level of experience (Riedesel et al., 2012).

Students repeating a subject, who have already received feedback on work, should ask the subject coordinator before resubmitting that work, even in part. Subject coordinators may view formative tasks (i.e. those designed to inform the student about their learning and where to go with it) differently from summative tasks (i.e. those intended to sum up a student's total learning). Similarly, the weighting of the task may be a factor in the coordinator's opinion about resubmitting work.

## Scenario O

Possible things you might do are to walk away and work somewhere else because you want to do the work for yourself; erase the working on the boards; photograph the work on the boards and then check your own work against it later; or attempt to understand what is on the boards, but then write up the work for yourself. Or you might simply decide to use what is on the boards. You might think that you can hardly be blamed for using something that is essentially lying around and seems to belong to no one or everyone. But as Yeo (2006) points out, the assessor is expecting to see your work. You might have a strong opinion about this, and this question is intended for both reflection and discussion (possibly lively!) about what assigned work is for, and what it means to 'own' it. Adopting the definition of Riedesel et al. (2012), acting with **academic integrity** means being open, honest and constructive, not just doing whatever you can get away with. Satisfaction in one's own learning and pride in one's own behaviour are given as motivations by students for doing work for themselves (Ashworth et al., 1997). One possible danger of using these solutions too closely would be that Olan does not actually master the mathematics in a way that can be reproduced in another context (e.g. an exam or in later years), even if it results in a short-term unfair advantage. The solutions may contain idiosyncrasies or errors that Olan may not recognise if using them uncritically. Possibly Olan and the originator, and maybe other students who have used the room, will submit work that is too similar and that will trigger an **academic misconduct** investigation. In that case, saying that the work came from a classroom board would not be a satisfactory response. The person who wrote up these answers and did not rub them off has also carelessly made misconduct possible.

## Scenario P

Early assessment tasks, generally low-stakes in weighting, are **formative assessments**, intended to see whether students have found their feet at uni and in the subject. Clearly, Pip and Tusi haven't found their feet. In large classes of hundreds of students, communication is generally via email and the LMS; this may seem impersonal at first, but it does mean that there is always a record to refer back to. However, it only works if it is set up correctly. Going to see the tutor was a good step. Hopefully, the tutor would realise that there were some settling-in issues, perhaps even more so than academic ones, to address.

Sharing notes made in class or from a consultation is not proscribed behaviour, but it has potential pitfalls, as this scenario makes clear (Sutherland-Smith, 2013). Pip trusted Tusi, but did not know that the notes would end up with Eli (Ashworth et al., 1997). Tusi could not control how they were subsequently used. Neither Tusi nor Eli knew exactly what was said along with the notes in the consultation, so they could misinterpret them.

The most likely outcome here is a warning and, if Pip is honest about how confusing everything is at first, probably some advice about finding help to get set up with email, LMS and so on. If Pip and Tusi take this chance to get a few more aspects of uni life sorted out, then they have made good progress in their first three weeks at uni, and the early assessment task has achieved its purpose for them. Knowledge in some disciplines is to a large extent cumulative, and it is imperative to not fall behind (Roberts, 2002).



## Scenario Q

Quentin's friend has carelessly made **copying** possible, which is **academic misconduct**. There is no defence to say that it was a mistake, or that the USB shared was the wrong one, or that Quentin had used a file that the friend did not intend to share. Even if Quentin is honest (which may not happen), the friend will receive the same kind of questions from an integrity adviser as Quentin does.

Quentin may have the impression that academic misconduct goes unpunished. In studies of misconduct, some students mention perceived staff indifference as a reason for taking shortcuts (Devlin & Gray, 2007); other students report the social or psychological consequences of being found out to be a deterrent. Guilt and embarrassment are mentioned; when students with this disposition do receive penalties for misconduct, they are unlikely to make this known, so this secrecy skews Quentin's impression of the situation (Ashworth et al., 1997). Universities do not make known the identities of students who have been reported for misconduct, or who have received penalties. However, some professional registration bodies mandate graduates to reveal misconduct, and graduates can be deregistered if they are subsequently found to have concealed it. Some of the bodies who require this information are the Legal Services Board of Victoria, Society of Certified Practising Accountants and Institute of Chartered Accountants; note that this is not an exhaustive list. Other bodies expect that undergraduates are educated in their code of conduct (e.g. Australian Computer Society and Engineers Australia).

Quentin is unlikely to be able to explain formulas developed by someone else (Simon & Sheard, 2015, 2016), particularly since the relevant classes were missed (which was the reason all this happened). Unusual correct answers also attract attention from markers, as has happened in this case. Possible outcomes for both Quentin and the friend are zero for the work or for the subject.

(Although this scenario resembles one found in Riedesel et al. (2012), it is actually based on the author's own knowledge of an event, with modifications to key details.)



"LAPTOP WITH A USB STICK" BY BRINA BLUM FROM WIKIMEDIA COMMONS USED UNDER CC0 1.0

## Scenario R

Talking with friends about methods in general terms is not misconduct; in fact, these kind of cooperative interactions are beneficial and encouraged (Alcock, 2013; McGowan, 2016). It is also not misconduct to look up unfamiliar terms, whether in a text or online source. But Ru has only read half of the question and has neither answered it nor achieved its intention. There are two key phrases that Ru has ignored: ‘hence’ and ‘in your own words’. ‘Hence’ indicates that the answer given should interpret, or build a conclusion on, the calculations that have gone before, which a Wikipedia entry in unfamiliar terminology cannot satisfy. The use of language that is beyond the scope of the subject and does not specifically answer the question will alert the marker to Ru’s work; if the assignment is put through text-matching software or even manual inspection it will be clear that these words are not Ru’s own (O’Malley & Roberts, 2012). Ru will not get a good mark for the final question, even if all the preceding calculations are correct, and may even face a hearing with an academic integrity adviser for **copying**. The penalty could be that a zero grade is given for the whole assignment. The lecturer or a demonstrator could have been consulted about what was required – they would have pointed out the key terms of ‘hence’ and ‘own words’ (and, in this case, ‘parabola’ and ‘safety’).

## Scenario S

Jools has used Steen’s answers without Steen’s consent to obtain an unfair advantage. Jools has broken Steen’s trust (Ashworth et al., 1997). Certainly, Steen has carelessly enabled misconduct, whether or not discernible misconduct actually happens. It is not **plagiarism**, because an attribution would not fix the issue, and it is not **collusion** or **collaboration**, because Steen was not knowingly involved. Jools has misled the assessor as to the origin of the ideas in the submitted work. This behaviour doesn’t fit neatly into any category, but it most closely fits **copying**. If both students are involved in a subsequent misconduct investigation, Steen’s explanation of how Jools got access to the work would not be a compelling one. Steen could have emailed the lecturer to request late or alternative submission, and needs to work on time management to avoid panicky situations like this (Alcock, 2013). This scenario suggests that Jools had done most of the work, but learning for oneself is what is needed long term. (This scenario is based on one in Riedesel et al. (2012)).

## Scenario T

Cynicism about the value of assessment, or about lecturers appearing to put little effort into creating tasks, are justifications that students give for taking shortcuts (Devlin & Gray, 2007). However, these factors do not justify misconduct. Perhaps the lecturer could have explained the purpose of the task better (Roberts, 2002). Tip could have asked the lecturer about why the work had been assigned, and what was supposed to be learned by doing it. Bretag et al. (2018) found that a learning environment that includes the interactive discussion of tasks is one in which misconduct is less likely to occur.

Whether the work has been published or not makes no difference to the fact that work found on the internet is not Tip's to present as original, and the assessor expects to see Tip's own thinking (Yeo, 2006). The point of the exercise is not the result of the analyses (which obviously the lecturer too could have googled, or done themselves), but Tip and the rest of the class members acquiring and demonstrating analytical skills (Yeo, 2007). Attributing the results handed in to a third-party source might avoid a misconduct allegation, but it would not result in a good mark, which is presumably what Tip hoped for.

## Scenario U

Uda's request and Zan's response are both inappropriate – showing someone else their assignment working to correct, or telling someone all the answers, are both actions that cross the line from **collaboration** to **collusion** (McGowan, 2016). Uda could have asked to discuss the work in general terms or, if Zan was not willing to do this, Uda could have asked the teaching staff from the subject for help (Sutton & Taylor, 2011). Checking ideas verbally with another student can be helpful to both students' learning if they then engage in some collaborative discussion (Alcock, 2013). However, to tell another student the answer to every question on an assignment is an action that is significant in scope (a factor considered in **academic misconduct** determinations). Zan's arrogant behaviour resembles that of a small minority of confident students described by Devlin and Gray (2007).

The scenario suggests that Uda may not be able to reach the correct answers reliably and, in this case, may well be reported for misconduct. Incorrect working that purports to lead to correct answers intends to deceive, and will alert the marker to a problem with the work. By using Zan's answers, Uda has copied and colluded; by supplying them, Zan has colluded.



'FEET BETWEEN YELLOW LINE' FROM PX:HERE USED UNDER CC0

## Scenario V

Vee's actions, in immediately removing the link and alerting Alex to the issue, indicate that Vee genuinely intended the group to be for convenient electronic **collaboration**, and not to promote misconduct (Barrett & Cox, 2005). Doing this outside the discussion tools supplied by the university through the LMS was possibly unwise, but was not misconduct. Vee needs to be honest if asked to attend a misconduct hearing, but may not be asked to do so.

There are several possible reasons for the two students who accessed the file having overly similar work. They may have acted separately and each copied closely, or they may have colluded, producing similar work based on Alex's. They may not even have really used the file, but they have raised the website and the file in their misconduct hearing, believing this will either help their case or muddy the waters. Being accused of misconduct leads to mistrust and destroys student relationships (Ashworth et al., 1997; Sutherland-Smith, 2013). Frustratingly for academics, getting to the truth becomes hard when it is 'everyone for themselves' rather than 'we're all in this together'. Alex has been careless. Modifying the work was not intended to deceive, but rather to make it distinctive again, realising that others could have accessed it. Being honest during the **academic misconduct** investigation is imperative, particularly since this is the second occasion Alex has been involved in one, and any penalty, if imposed, would be more severe. Vee and Alex could have alerted the subject coordinator to what happened before any students submitted work. Unlike the other two students, Alex should be able to produce drafts of the work, with earlier dates for file creation. Students can become caught up in someone else's misconduct unwittingly (Devlin & Gray, 2007; Sutton & Taylor, 2011), but should not then attempt to cover up what they did in good faith, or attempt to mislead. Keeping copies of rough notes, drafts and emails is a good idea; academic misconduct investigations find it suspicious if a student cannot show drafts or notes, or cannot provide evidence of conversations they claim to have had (such as Vee alerting Alex).

## Scenario W

Talking about an assignment in general terms is not misconduct. Students are permitted to be collaborative with one another, and the other student could have talked to Win, within boundaries. Win wanted to know what the question meant, and did not ask for the answer. However, some students choose to protect themselves from any whiff of misconduct, either because they don't understand what is allowed, or because that is their choice (Sutton & Taylor, 2011). Alternatively, they may have been accused of misconduct previously and are now distrustful or ultra-cautious (Sutherland-Smith, 2013). As this scenario shows, online forums are not safe places to look for help for a number of reasons. Win can access help from the teaching staff in the subject during their consultation hours; these people know where to stop with their assistance.

If Win uses the answer provided by the second person who responds in the forum, this is **contract cheating**, despite the fact that no payment was made (Bretag et al., 2018). Win has also made the misconduct of the other students possible, by posting the exact question in the forum. Enabling misconduct is also misconduct. (Universities also regard the posting of their intellectual property, in this case the words of an assessment task, to an external site as a breach of rules.) All three students could receive a penalty for misconduct, such as zero for the task. It does not matter that they used incorrect work that would have received a low mark. They have fallen into what is called a 'cheat trap' (O'Malley & Roberts, 2012).

Win has learned so little in doing the assignment that the incorrect work was not recognised! The purpose of assessment is always to enable learning (**formative assessment**) or to measure it (**summative assessment**), so Win has not achieved the purpose of the assignment.



## Scenario X

Text-matching software can be used to detect similarities between an assignment's text and other work but, on its own, it does not define what is and is not acceptable (Simon, 2016). Non-text material (e.g. diagrams, designs, photographs, computer code and handwritten calculations) is subject to similar principles as text. It can be considered to be plagiarised or copied if inappropriately incorporated into what should be a person's own work (Porter, 2010).

If the figure that Xanda wants to use comes from a book or printed source, Xanda must reference that source to avoid **plagiarism**. If Xanda re-draws the diagram, it should still be referenced as being based on the source; it is not Xanda's original idea, even if it is improved, simplified or modified in some way (e.g. see the modified and attributed figure in Chapter 1). Although it sometimes seems that everything on the internet is **common knowledge**, or belongs to no one or everyone, internet sources for ideas or diagrams should also be referenced. The consequences for not correctly attributing the figure would depend on how much experience Xanda has, and whether this has been explicitly covered in learning guides. It may be just a warning.

That being said, some diagrams might fall into the category of general knowledge for a discipline, such as a basic circuit design, a flow chart or the graph of a parabola. Since Xanda received a letter about the diagram, this does not seem to be the case in this scenario. Students should become familiar with the discipline's conventions, and if in doubt, should ask.

If Xanda comes across another student's work by accident, through that person's carelessness, and uses it, this is **copying**. In this case, Xanda would not be able to satisfactorily explain the origin of the figure, and could receive zero for the assignment, even if the only copied part is the figure. And even if 'it's only a graph', as a student was quoted as saying (Yeo, 2006), students are expected to produce their own work, not someone else's, for assessment.

## Scenario Y

Yve faces pressures to succeed, which many students do, either from their family, from their own expectations, or because they want to qualify for another program after the current one (Devlin & Gray, 2007). By relying on group support, it seems that Yve has not become independently competent. The assignments were **formative assessments**, and by getting help from the group to get good marks, the level of progress Yve has made is being misrepresented to the marker. The teaching staff in the subject do not have a clear idea of what Yve can and can't do, and neither does Yve. It seems that a different kind of help is needed, the kind that would support the development of Yve's own skills and personal understanding, but neither Yve nor the teaching staff realise this.

Although in this scenario it doesn't appear that any advantage was taken by the other students who saw Yve's work, not all students are as fortunate as Yve in this regard, particularly in competitive environments (e.g. getting into graduate programs) (Stepp & Simon, 2011). Improving one another's work by editing the symbols, like debugging one another's programs, could cross the line to **collusion**. Accessing university services, such as learning support, is unlikely to result in **academic misconduct**, and these services will discourage over-dependence by supporting a student's skill development. Yve's focus on, and satisfaction with, good marks for coursework has not provided adequate learning and preparation for **summative assessment** in this subject, or in the future. Using a study group to bounce around ideas and to keep motivated and on track can be great, but each group member is ultimately accountable for their own learning (McGowan, 2016).



## Scenario Z

This seems like immature behaviour and, possibly, this group just thought it was funny to trick the demonstrator in this way. Scrimshire et al. (2017) found a correlation between **academic misconduct** and the personality characteristics of being impulsive, irresponsible and venturesome (low 'prudence' scores) and being compulsively socially interactive (high 'sociability' scores). Rebellion, or seeing what can be got away with, has been identified as leading to a small amount of **academic misconduct** (Simon & Sheard, 2015); disappointment in the learning environment is another factor in non-constructive behaviour (Ashworth et al., 1997). Perhaps the students in this scenario considered that the labs were not particularly important, or they all just wanted to get finished sooner, or perhaps some of them were struggling and they wanted to help each other out so that no one was embarrassed in class. This way of interacting may be the norm in their group (McGowan, 2016) and refusing to join in will lead to social isolation, or worse. None of this is an adequate justification and neither is it helpful to any group member who, like Zsa, actually can't write the code.

Zsa might not be able to explain the code for a number of valid reasons, such as having got it to work by tweaking or trial and error, or being better at writing code than with verbal expression (Simon & Sheard, 2016), but the Gmail message that the demonstrator has seen belies this.

This is blatant misconduct, both **collusion** and **copying**, and the demonstrator has evidence of it. Both Oki and Zsa, plus the group of friends on the email distribution list, are likely to be reported for misconduct. For a first offence, if they are honest and take the misconduct process seriously, they will probably get a warning and some corrective instruction.



'UNIVERSITY COMPUTER LAB' FROM PIXABAY USED UNDER CC0

## Scenario VL

The most likely explanation for the post made in Onlin's name is **impersonation**. That is, Onlin has given confidential information about how to access the LMS to another person, intending that person to do the work instead. The post could have been taken down by Onlin or the impersonator, or archived and hidden by the lecturer. Impersonation is a form of **contract cheating** which may take place on the whole-of-course or whole-of-subject scale, as in this scenario. Enabling someone who does not have the right to a university's computer facilities to access them is a breach of other policies, and in many universities would add general misconduct to the academic misconduct, although they may be investigated together. Using social media to release information that is potentially damaging or bullying to another student is also a form of general misconduct. Commercial contract cheating services are exploitative both of the customers and of the "experts" they use (Bailey, 2020).

Peer-to-peer file sharing sites try to suggest that they are simply repositories or services that enable students to help one another (Rogerson and Basanta, 2016; Rowland et al., 2018). They state in their terms and conditions that the onus lies with the person posting to only upload materials for which they hold the rights. The copyright for course materials resides with the university. As well as breaching copyright, enabling other students to cheat, by uploading marked assignments and exam questions, is a form of academic misconduct. Contract cheating does not have to involve actual money, and in this case Etomer has used files of information to obtain access to a potentially advantageous package of services, which are a deliberately confusing mixture of legitimate and illegitimate help. Etomer has also lost all control over how work produced honestly and individually might be used or shared further. Etomer should check in the website information how to get the materials taken down. There are other ways to help fellow students (e.g. university peer support programmes) and there are legitimate methods of obtaining help should that be needed later on. If the website is obstructive about taking down the materials, Etomer could ask the university to help with this, as institutions can issue take-down notices, also. Hoping that nothing will happen is not a good option; students have been blackmailed and degrees revoked years after misconduct, when even more (such as a job) is at stake.

## Scenario XIX

Whether Divoc pays someone contacted by an online service (or even a paper notice on campus) to do a piece of work, or a family member or friend does it as a favour, this is called **contract cheating**. This term was introduced by Clarke and Lancaster (2006), who coined it in the context of coding assignments put out to tender. In text-based disciplines the suppliers may be called essay mills or ghost-writers. Dawson (2021, p. 39) points out that cheating services go looking for students. Commercial suppliers of these illicit services place advertisements in social media feeds, and their websites can deceptively mirror legitimate websites, using pirated institutional logos to create an impression of legitimacy or trustworthiness. They may suggest that they are supportive and caring for students under pressure, or they may suggest that using their services leaves more time for other activities. However, unlike a help site authorised by a student's university, they will also feature testimonials, pricing, an order button and will request financial details (Rowland et al. 2018).

Even before legislation was passed to make advertisement and supply of such services in [New Zealand](#), [Australia](#) and the [UK](#) illegal, this was an industry that helped people cheat. Since students do not want their use of such services known, they are open to coercion and blackmail. A diagram (Figure 1, Yorke et al., 2022) shows the pathway to such blackmail, and the study in that paper shows that the majority of students were not aware of this possibility (certainly, Divoc was not). Bailey (2020) lists seven different ways in which this industry is exploitative.

There is no quality control, and little come-back for dissatisfied students when the supplied work is sub-standard (Sutherland-Smith and Dullaghan, 2019). Work produced by third parties can often be detected because it is not directly relevant to the task assigned within the context of the class itself, as Divoc has found.

During the pandemic, with isolation and the adjustment to online learning and assessment, requests to one such commercial contract cheating site rose steeply (Lancaster and Cotarlan, 2021). So too did the number of students reported for their use. On-line and flexible arrangements, which require discipline in self-organisation, have continued since campus closures have relaxed. Accessing university learning support (available flexibly) and requesting additional time for tasks are things Divoc could have done. Making the institution aware of the blackmail will be painful, but Divoc will find that universities want to report and shut down such services that prey on their students and undermine the quality of their degrees.

## Scenario XL

Antine is suggesting that Pan access a commercial contract cheating service, which may also offer other services which resemble on-line tutoring. Getting assistance from a friend on a task which is intended to be done individually could be **collusion** or **contract cheating**. Private tutoring, rather than accessing the support and tutorials provided by the university, can also be contract cheating if the tutor works directly on the student's task (Lancaster & Clarke, 2016). University-supplied services provide learning help and advice about tasks which is of an appropriate and permitted kind. Antine may in fact be an agent for Chuberlogg, either being paid to promote it or receiving its services at a reduced rate for recruiting other students as customers. Legislation limits the capacity of these services to openly advertise.

As Iso tries to make clear by using analogies, ultimately graduates need to know and be able to do certain things in the workplace. Degree certificates should attest to genuine qualification. Iso's comparisons highlight competence, accountability, and trust. Healthcare workers, policy makers, teachers, financial advisors – it's hard to think of a job in which being incompetent does not endanger others (Dawson, 2021, p. 141). The quality and nature of the work supplied to Antine, and possibly to Pan, may have prompted an investigation (Sutherland-Smith and Dullaghan, 2019). Universities can also use tools to search for online answers to their assessment tasks. Although these services suggest that they supply bespoke answers, they make them available to other students doing the same task, and matches within the class may have been noted. Alternatively, it is possible that Iso has acted as a whistle-blower, alerting the institution to Antine's attempts to encourage Pan to cheat.

If Pan and Iso are found to have engaged in contract cheating, there will be serious penalties as specified in the university policies. If they are permitted to finish their course, this finding may have to be disclosed when seeking professional registration, and the consequences for not doing so are severe. If Antine is an agent for Chuberlogg, this would also breach the laws that ban the promotion of contract cheating, which are enforced by TEQSA in Australia. If contract cheating takes place but is not penalised during the course of study, graduates have been threatened with exposure to their employer by the commercial contract cheating provider, or have had their degrees revoked by their institution.

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# Glossary

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<b>Academic integrity</b>	The expected form of behaviour in assessment. It means acting in a way that is honest, fair, open and constructive.
<b>Academic misconduct</b>	An overarching term for all types of behaviour that result in an unfair advantage in assessment, including contract cheating, collusion, copying and plagiarism. It also covers behaviours such as being careless with your work so that copying becomes possible, or deliberately enabling copying, and any other dishonest or unconstructive behaviour in the context of assessment.
<b>Collaboration</b>	Interacting with other students in a way that is permitted. Even when assignments are intended to be done individually, general discussion of the topic is a permitted form of interaction. Collaboration has a positive connotation.
<b>Collusion</b>	Two or more persons interacting in a way that misrepresents to the assessor the understanding or contribution of the person who submits a piece of work, or misleads the assessor as to the origin of the work. Collusion is a negative term.
<b>Common knowledge</b>	Ideas or terms that are well known to members of a discipline and do not need attribution in the context of that discipline.
<b>Contract cheating</b>	A situation in which a person asks someone else to produce part or all of the work, which they then submit for an assessment task. Payment does not have to be involved.
<b>Copying</b>	The use of someone else's words (or calculations, code or diagrams) that can't be put down to poor attribution and is intentional.
<b>Formative assessment</b>	Tasks intended to give information to students about their progress and current level of understanding, usually making only a small numerical contribution to the final mark for a subject.
<b>Impersonation</b>	One person fulfilling the course or attendance requirements for another, from a single quiz to all requirements of a subject or programme of study; a particular form of contract cheating.

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<b>Plagiarism</b>	The use of another person's words or ideas or diagrams that could have been attributed to that person to remove the misconduct; without that attribution, it appears that you are claiming them as your own.
<b>Self-plagiarism</b>	The re-use of your own words or ideas, when fresh work is expected.
<b>Summative assessment</b>	Tasks used to determine the overall or final level of achievement of a student in a subject.

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# Version history

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Version	Date	Change	Further notes
v1.01	08/03/2023	Author included several new scenarios (VL, XIX, XL) that feature commercial contract cheating and the pandemic circumstances.  Published under a CC-BY-NC-SA which permits adaptive re-use.	

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Category	Item	Status (Y / N)
<b>Organising Content</b>	Content is organised under headings and subheadings	Y
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<b>Font Size</b>	Font size can be zoomed to 200%	Y

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