

This sample exam refers to past exam questions from the Study Guide. The Study Guide is available from the website - www.maths.uq.edu.au/courses/MATH1040, or from Uni Copying Services. Note that the Study Guide contains worked solutions to most of the questions. Your exam has the same formulae at the end.

Part A

For each of the following 30 questions, enter the correct value of x into the corresponding box. There is no need to show any working. Each correct answer is worth 1 mark; each incorrect answer is worth 0 marks. (Hint: In each case, x is an integer between -6 and 6 inclusive.)

For practice questions, try:

- Questions 1 to 30 on Page 80 of your Study Guide.
- Questions 1 to 27 on Page 85 of your Study Guide, but not Questions 13, 18, 19, 26 or 27.
- Questions 3 to 26 on Page 90 of your Study Guide.
- Questions 3 to 26 on Page 95 of your Study Guide, but not Questions 11, 14, 15 or 20.
- Questions 3 to 29 on Page 101 of your Study Guide, but not Questions 5-7 or 21-24.
- Questions 3 to 23 on Page 107 of your Study Guide but not Questions 5-7, 17 or 18.
- Questions 3 to 20 on Page 113 of your Study Guide, but not Questions 5-7, 17 or 18.
- Questions 3 to 12 on Page 119 of your Study Guide, but not Questions 4 or 8.

For each of the following multiple choice questions, **enter your answer into the corresponding box**. There is no need to show any working. Each correct answer is worth 1 mark; each incorrect answer is worth 0 marks.

For practice questions, try:

- Multiple choice Questions 1, 3, 4, 5 and 7 on Pages 80 and 81 of your Study Guide.
- Multiple choice Questions 1 to 4, 6 on Pages 85 and 86 of your Study Guide.
- Multiple choice Questions 1 to 3, 6 on Pages 90 and 91 of your Study Guide.
- Multiple choice Questions 1 to 3, 5, 7, 9 on Pages 95 and 96 of your Study Guide.
- Multiple choice Questions 3, 5 on Pages 101 and 102 of your Study Guide.
- Multiple choice Questions 4, 6, 9 on Pages 107 and 108 of your Study Guide.
- Multiple choice Questions 4, 6, 9, 13 on Pages 113 and 114 of your Study Guide.
- Multiple choice Questions 5, 9 on Page 119 of your Study Guide.

The last question in Part A is on Venn diagrams. Try the last question in Part A on Pages 81, 86 and 96.

Part B

There will be a range of short answer questions on Chapters 1-5. For practice questions, try the following Part B questions:

- Mid-semester exam 2009 Questions 1-11
- Mid-semester exam 2008 Questions 1-9
- Mid-semester exam 2007 Questions 1-5, 7-10, 12
- Mid-semester exam 2006 Questions 1-4, 6-8, 10-13
- Mid-semester exam 2005 Questions 1-6
- Mid-semester exam 2004 Questions 1-4, 6, 7, 9, 11
- Mid-semester exam 2003 Questions 1, 2, 4, 6, 7, 8, 11
- Mid-semester exam 2002 Questions 1-6, 8, 11

Some formulae

Principle of inclusion/exclusion: $P(A \cup B) = P(A) + P(B) - P(A \cap B)$

Mutually exclusive events: $P(A \cup B) = P(A) + P(B)$

Conditional probability: $P(A | B) = \frac{P(A \cap B)}{P(B)}$

Independent events: $P(A \cap B) = P(A) \times P(B)$

Have you read Page 79 of the Study Guide? It gives some good ideas on how to approach the exam.