

BOARD OF STUDIES
NEW SOUTH WALES

**2000
SCHOOL
CERTIFICATE
TEST**

7 November
Start 9.25 am

MATHEMATICS

**SAMPLE
QUESTIONS
& FORMULAE
BOOKLET**

Instructions for answering questions

- Complete your answers in either blue or black pen.
- ALL answers to questions in Section 1 and Section 2 Part B must be written in the spaces provided in the Section 1 and Section 2 Part B Question and Answer booklets.
- **Completing the diagram**

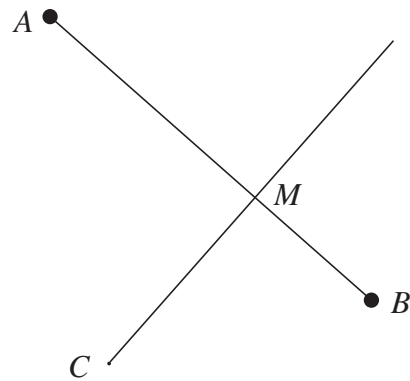
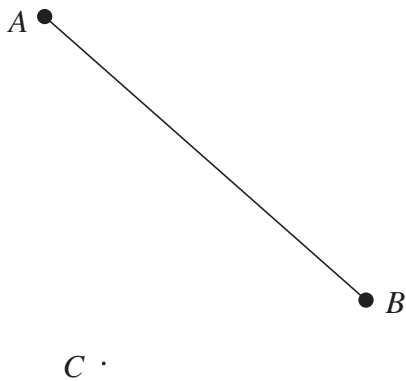
You may wish to use a pencil for completing the diagram questions.

Sample 1:

Draw a line through C , perpendicular to AB .

The question has been answered below.

Label the point of intersection of the two lines, M .



Line CM is drawn perpendicular to AB using a set square or pair of compasses and ruler.

● **Multiple choice**

Complete your answers to the multiple choice questions (in Section 2 PartA) on the answer sheet provided. Select the alternative A, B, C or D that best answers the question. Fill in the response oval completely.

Sample 2: $2 + 4 =$ (A) 2 (B) 6 (C) 8 (D) 9
 A B C D

If you think you have made a mistake, put a cross through the incorrect answer and fill in the new answer.

A B C D

If you change your mind and have crossed out what you consider to be the correct answer, then indicate the correct answer by writing the word **correct** and drawing an arrow as follows.

A B C D
 correct
 ↙

● **Multiple choice questions that may have more than one correct answer**

Complete your answers to the multiple choice questions that may have more than one correct answer in the Section 2 Part B Question and Answer Booklet.

Sample 3: $\frac{2}{3} =$ (A) $\frac{2-1}{3-1}$ (B) $\frac{2+1}{3+1}$ (C) $\frac{2 \times 1}{3 \times 1}$ (D) $\frac{2 \div 1}{3 \div 1}$
 A B C D

Two oval shapes have been filled in to show the two correct answers.

If you think you have made a mistake, put a cross through the incorrect answer and fill in the new answer.

If you change your mind and have crossed out what you consider to be the correct answer, then indicate the correct answer by writing the word **correct** and drawing an arrow.

FORMULAE

For use in SECTION 1 and SECTION 2

Circumference of a circle = $\pi \times$ diameter

$$[C = \pi d]$$

Area of a circle = $\pi \times$ radius squared

$$[A = \pi r^2]$$

Area of a parallelogram = base \times perpendicular height

$$[A = bh]$$

Area of a rhombus = half the product of the diagonals

$$\left[A = \frac{1}{2}xy \right]$$

Area of a trapezium = half the sum of the parallel sides \times perpendicular height

$$\left[A = \left(\frac{a+b}{2} \right) h \right]$$

Volume of a prism = area of cross-section \times height

$$[V = Ah]$$

Volume of a cylinder = $\pi \times$ radius squared \times height

$$[V = \pi r^2 h]$$

Pythagoras' theorem states:

In a right-angled triangle,

the hypotenuse squared = the sum of the squares of the other two sides

$$[c^2 = a^2 + b^2]$$