



BOARD OF STUDIES
NEW SOUTH WALES

**1999
SCHOOL
CERTIFICATE
TEST**

**9 November
Start 9.25 am**

**MATHEMATICS
SECTION 1**

General Test Instructions

- Preparation time: 5 minutes
- Working time: 2 hours
- The supervisor will tell you when to begin the test
- This test has TWO sections
- Attempt ALL questions
- There will be a short break between Section 1 and Section 2
- Calculators may be used in Section 2 only
- The Sample Questions & Formulae Booklet may be used in both sections.

Directions for Section 1

- 1 You have 30 minutes to answer Section 1
- 2 Section 1 Questions 1–25 (25 marks)
- 3 Calculators are NOT to be used in Section 1
- 4
 - Complete your answers to Questions 1–12 on Section 1—Answer Sheet 1
 - Complete your answers to Questions 13–25 on Section 1—Answer Sheet 2

Complete your answers to Questions 1–12 on Section 1—Answer Sheet 1.

1 $2 \times 5 + 7 \times 10 =$

- (A) 80 (B) 150 (C) 170 (D) 700

2 Write 57 263 to the nearest hundred.

- (A) 57 000 (B) 57 200 (C) 57 260 (D) 57 300

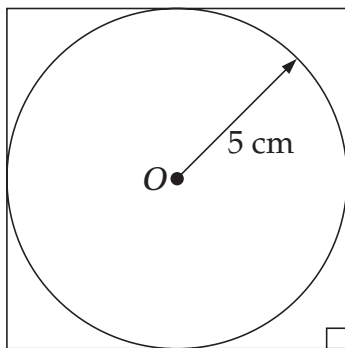
3 $\frac{5}{100} + \frac{3}{10} =$

- (A) 0.305 (B) 0.35 (C) 0.503 (D) 0.53

4 102 multiplied by 395 is about

- (A) 4000 (B) 40 000 (C) 400 000 (D) 4 000 000

5



A circle with radius 5 cm is drawn in a square as shown.

The area of the square is

- (A) 20 cm^2
(B) 25 cm^2
(C) 40 cm^2
(D) 100 cm^2

6 Which decimal is closest to 5.17?

- (A) 5.16 (B) 5.175 (C) 5.18 (D) 5.2

7 Tran caught 30 fish but 2 out of every 3 were too small to take home.

How many fish were too small to take home?

- (A) 10 (B) 12 (C) 18 (D) 20

- 8 Sylvia starts watching a video at 7:55 pm.
The video runs for 135 minutes.

At what time will the video finish?

- (A) 9:10 pm (B) 9:30 pm (C) 10:10 pm (D) 10:20 pm

- 9 The fraction $\frac{1}{3}$ is

- (A) less than $\frac{3}{10}$ (B) greater than $\frac{7}{20}$
(C) equal to 0.3 (D) equal to 33%

- 10 John is asked to find 24% of \$8.96.
He enters into his calculator $24 \div 100 \times 896$ and the display is 215.04.

The answer, to the nearest five cents, is

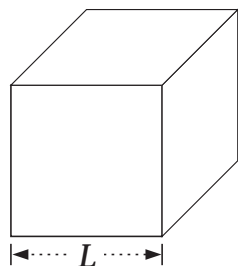
- (A) 215.05 cents (B) 21 505 cents (C) \$2.15 (D) \$215.05

- 11 If $\Delta < -3$, then Δ can have the value

- (A) 0 (B) $-\frac{1}{3}$ (C) -2 (D) -4

- 12

NOT
TO
SCALE



The volume of a cube is 64 cubic centimetres.

The side length (L) of the cube is

- (A) 4 cm
(B) 8 cm
(C) 16 cm
(D) 32 cm

Complete your answers to Questions 13–25 on Section 1—Answer Sheet 2.

- 13 This timetable shows the times a bus departs from the terminal.

DEPARTURE TIMES	
am 4	53
5	10 35
6	08 28 43 58
7	14 28 43 58
8	13 28 47
9	17 47
10	17 47

The first bus departs at 4:53 am.
Paula misses the 8:47 am bus by 3 minutes.

How long does she wait for the next bus?

- 14 Find $2\frac{1}{2}\%$ of \$600.

- 15 The fraction $\frac{61}{\square}$ has a value between 4 and 7, where \square is a whole number.

What is a possible value for \square ?

- 16 Each day Emily wears a jacket, a blouse and a pair of slacks.
She owns 2 jackets, 4 blouses and 3 pairs of slacks.

How many different combinations can she wear?

- 17 Jim bought a salad roll for \$6.00.
The next day the price had risen to \$6.60.

Find the percentage increase on the original price.

- 18 Ice-cream must be stored at -4°C .
The temperature of a freezer is 2°C .

What change in temperature is needed to store ice-cream?

- 19 A bottle of wine costs \$10.
The wine itself costs \$6 more than the bottle.

What is the value of the bottle?

20



HOLIDAY FUN TRAVEL	
<i>Package 1</i>	<i>Package 2</i>
5 nights, \$1200	7 nights, \$1400
includes:	includes:
return airfare	return airfare
accommodation	accommodation

What is the cost of a return airfare?

- 21 The recommended amount of a washing powder is one cup per wash.

If the recommended amount of powder is used per wash, then a box contains enough powder for 24 washes.

Theresa uses only $\frac{3}{4}$ cup each wash.

How many washes will she get from a box?

22

$$\begin{array}{rclcl}
 1 & = & 1 & = & \frac{1}{2}(3 \pm 1) \\
 1 + 4 & = & 5 & = & \frac{2}{2}(6 \pm 1) \\
 1 + 4 + 7 & = & 12 & = & \frac{3}{2}(9 \pm 1) \\
 1 + 4 + 7 + 10 & = & 22 & = & \frac{4}{2}(12 \pm 1)
 \end{array}$$

Use the pattern to find the value of

$$1 + 4 + 7 + 10 + \dots + 25$$

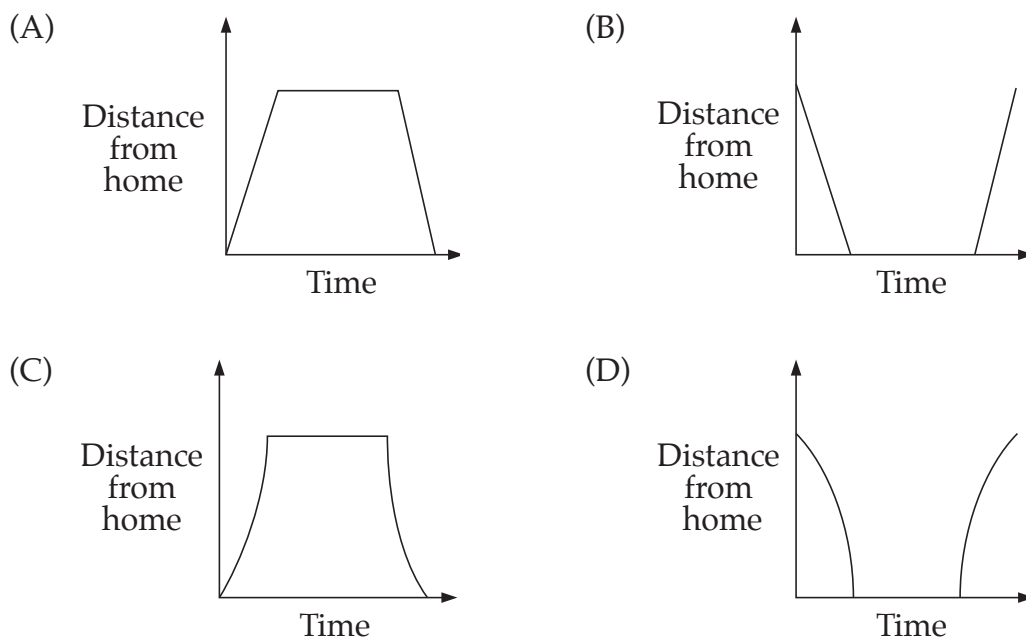
Each of Questions 23, 24 and 25 may have MORE THAN ONE correct answer. Fill in EVERY answer for each of these questions on Section 1—Answer Sheet 2.

23 7.3×5 is the same as

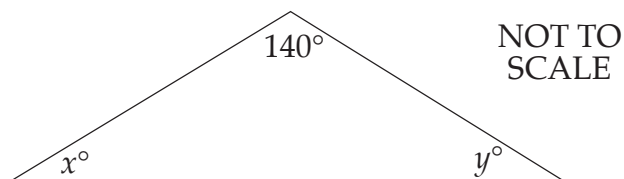
- (A) $7.3 \times 10 \div 2$ (B) $7.3 \div 10 \times 2$ (C) $73 \div 0.5$ (D) 73×0.5

24 Peta rides to school in the morning and back home in the afternoon.

Which of the following could represent this information?



25



In the triangle, the values of x and y could be

- (A) $x = 40$ and $y = 0$ (B) $x = 20$ and $y = 20$
 (C) $x = 45$ and $y = 5$ (D) $x = 25$ and $y = 15$

End of questions in Section 1 that may require you to fill in more than one correct answer.

BLANK PAGE

BLANK PAGE