



KASLER

Kastelan & Samways Learning & Educational Resources

**PRACTICE
PAPER 4
SCHOOL
CERTIFICATE
TEST**

**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
- 5
 - Complete your answers to Questions 13–25 on
Section 1 – Answer Sheet 1

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

1 Estimate the answer to $\sqrt{5+2 \times 7}$.

- (A) 4.5 (B) 7 (C) 16 (D) 30
-

2 If $y = 2x^2 - 7$, find a value for x when $y = 1$.

- (A) -5 (B) -3 (C) -2 (D) 4
-

3 What is $4 \cdot 75 + 3 \cdot 2$?

- (A) 4.7532 (B) 5.07 (C) 7.95 (D) 7.97
-

4 The answer to $\sqrt{120}$ is approximately

- (A) 8 (B) 9 (C) 10 (D) 11
-

5 $2 \times (2^3)^8$ equals

- (A) 2^{12} (B) 2^{22} (C) 2^{25} (D) 2^{48}
-

6 If 9.999 187 was rounded to 2 decimal places, the answer would be:

- (A) 9.90 (B) 9.91 (C) 9.99 (D) 10.00
-

7 When water freezes it's volume increases by 4%.

What will be the volume of 4L of liquid water after it freezes?

- (A) 4.04L (B) 4004 cm^3 (C) 4.016 L (D) 4160 cm^3
-

- 8 Belinda and Andrew entered a sailing race. Belinda finished in 2h 36min 14s, while Andrew finished in 2h 42min 2s.

What was the difference between the two times?

- (A) 4min 12s (B) 4min 48s (C) 5min 12s (D) 5min 48s
-

- 9 A coin is 40mm in diameter and 2mm thick.

The volume of metal used in the coin is:

- (A) $4\pi \text{ cm}^3$ (B) $8\pi \text{ cm}^3$ (C) $800\pi \text{ mm}^3$ (D) $3200\pi \text{ mm}^3$
-

- 10 If $x^3 = 18\,399.744$, then which of the following is x ?

- (A) 26.1 (B) 26.2 (C) 26.3 (D) 26.4
-

- 11 Two numbers add to give 8 and multiply to give -48 .

Which of the following statements is true?

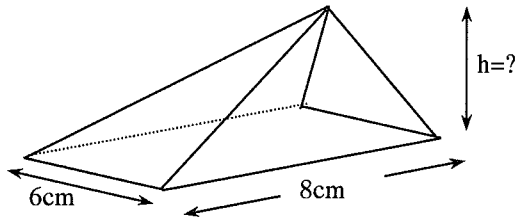
- (A) Both numbers are even (C) One number is odd and the other is even.
(B) Both numbers are odd (D) Both numbers are positive.
-

- 12 A newspaper costs \$2 each day. A weekly subscription (7 days) costs \$10.00. The percentage discount is closest to:

- (A) 10% (B) 12% (C) 29% (D) 40%
-

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

13 What is the height of the pyramid if the volume of the pyramid is 8cm^3 ?

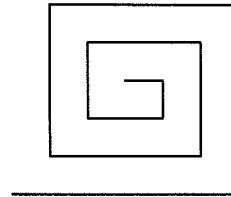


14 Find 52% of \$850.

15 A black and yellow NSW number plate for cars has 3 letters followed by 3 numbers. How many different number plates start with the letters RY?

16 Julie is making a square spiral drawn to scale to the right.

Her first line starts in the middle and is 1cm long.
 Her second line goes down and is also 1cm long.
 Her third line is 2cm long.



Find how long the 42nd line will be?

17 A car is selling for \$22 000, including 10% GST. How much was the car before the added tax?

18 In the magic square all rows, columns and diagonals add to the same number.

What is the value of x ?

6	7	
x	8	
	9	

19 If it takes 3 men 6 days to load 9 shipping containers, how long would it take 5 men to load 20 shipping containers if they all work at the same rate?

20 Thomas sees 250g of jam on special for \$1.45, or 375g for \$2.12. Which price gives the better buy?

21 To make a loaf of bread, Rachel mixes 3 cups of bread mix, 1 cup of water and $1\frac{1}{2}$ teaspoons of yeast. How many teaspoons of yeast would be added to 5 cups of bread mix?

22 The 28th of April 2000 was a Sunday. On what day will the 28th of May fall?

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 0.25 is the same as:

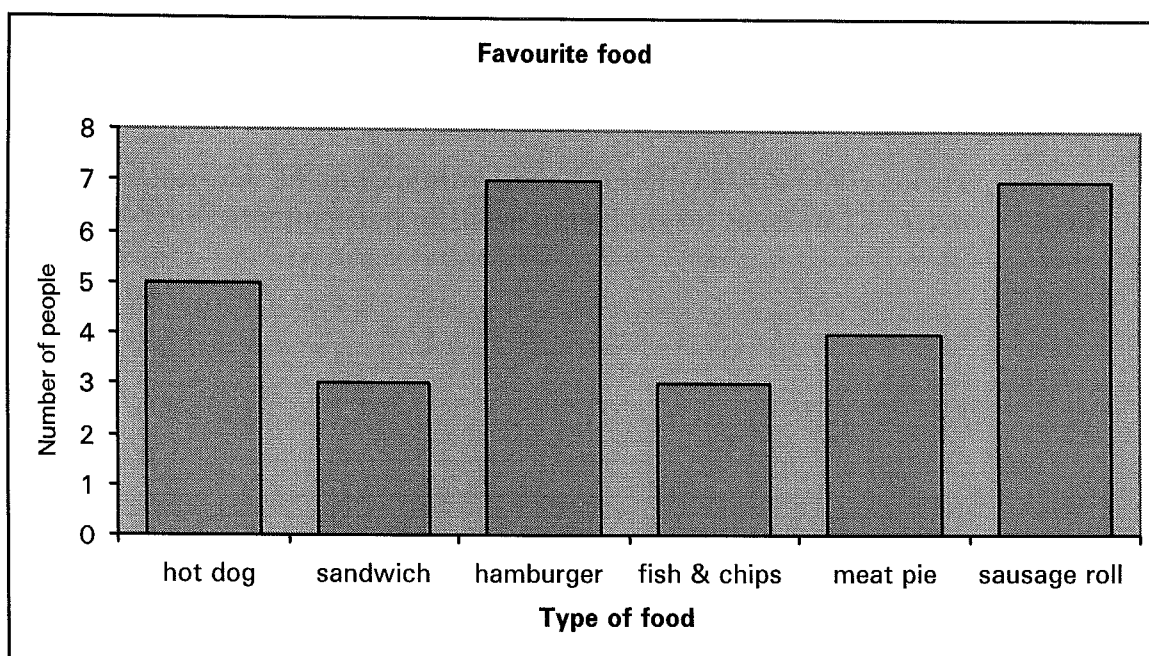
(A) $\frac{1}{2} + \frac{1}{5}$

(B) $\frac{1}{2} \times \frac{1}{2}$

(C) $\frac{1}{2} + \frac{5}{100}$

(D) $\frac{13}{16} - \frac{9}{16}$

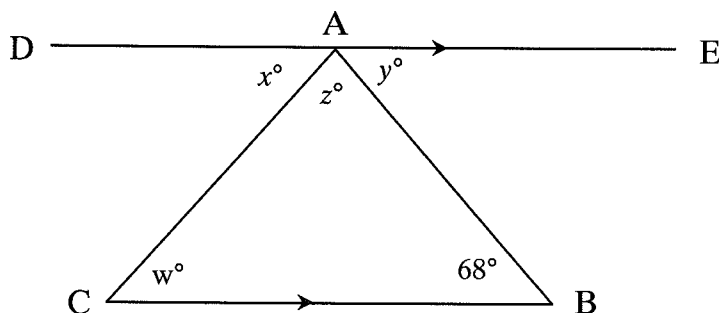
24 Carolyn asked each member of her class about their favourite take-away food. She recorded the results in the graph below:



Which of the following statements are true?

- (A) 29 people were asked about their favourite food.
(B) Meat pies were more popular than sandwiches.
(C) Half the people either liked sausage rolls or meat pies.
(D) Hamburgers were twice as popular compared to fish & chips..

- 25 In the diagram below, triangle ABC is isosceles and DE is parallel to BC.



Which statements are true?

- (A) $w^\circ = 68^\circ$.
- (B) x° and w° are co-interior angles.
- (C) $x^\circ = 68^\circ$.
- (D) $z^\circ = 90^\circ$.

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

End of Section 1

