

# Test 5: Non-calculator

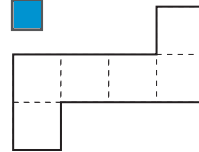
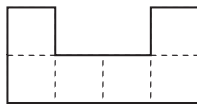
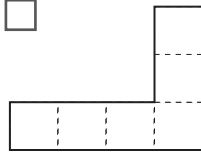
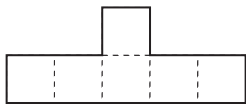


## Instructions

- A correct answer scores 1 mark, and an incorrect answer scores 0.
- Marks are not deducted for incorrect answers.
- No marks are given if more than one answer alternative is shaded.
- Choose the alternative which most correctly answers the question and shade in the box next to it.

### QUESTION 1

Which of these nets can be folded to make a cube?



SHADE ONE BOX



### QUESTION 2

A number is multiplied by itself and then 13 is added. The answer is 22. What is the number?

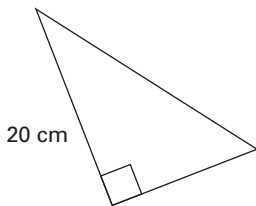
3



WRITE YOUR OWN ANSWER

### QUESTION 3

The area of this triangle is  $90 \text{ cm}^2$ . What is the length of its base?



4.5 cm



9 cm



18 cm



20 cm

SHADE ONE BOX



### QUESTION 4

What is the best estimate for  $17 \times 32 \times 35 \times 9$ ?



$10 \times 30 \times 30 \times 10$



$10 \times 30 \times 40 \times 10$



$20 \times 30 \times 40 \times 10$



$20 \times 20 \times 30 \times 10$

SHADE ONE BOX

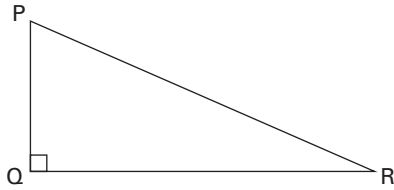


**QUESTION 5****WRITE YOUR OWN ANSWER**

George cuts his birthday cake into 24 equal slices. He eats 25 per cent of the slices. How many slices are left?

**QUESTION 6****SHADE ONE BOX**

What is the hypotenuse of the following triangle PQR?

☐ PQ☒ PR☐ QR☐ QP**QUESTION 7****WRITE YOUR OWN ANSWER**

A tap leaks at a rate of 30 mL every 20 seconds. How much water is wasted in 5 minutes?

 mL**QUESTION 8****SHADE ONE BOX**

If  $y = -3x + 4$  and  $x = -2$ , what is the value of  $y$ ?

☐ 1☐ -1☐ 2☒ 10**QUESTION 9****SHADE ONE BOX**

A bee flies at a speed of 0.3 m/s. How long will it take to fly 60 m?

☐ 18 seconds☐ 180 seconds☒ 200 seconds☐ 20 seconds**QUESTION 10****WRITE YOUR OWN ANSWER**

Wendy saved \$617.00 by buying her lounge suite at a 20% off sale. What was the original price?

**QUESTION 11****SHADE ONE BOX**

A cube has side lengths of 20 cm. What is its volume in cubic metres?

☒ 0.008☐ 0.08☐ 0.8☐ 8**QUESTION 12****SHADE ONE BOX**

There are 100 marbles in a bag. Twenty marbles are green and the rest are blue. Petra picks a marble without looking. What is her chance of picking a blue marble?

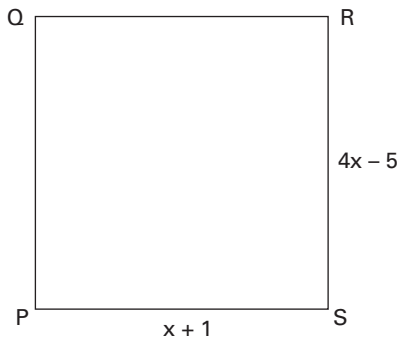
☐ 2:1☒ 4:5☐ 1:2☐ 5:4

**QUESTION 13**

SHADE ONE BOX



PQRS is a square.



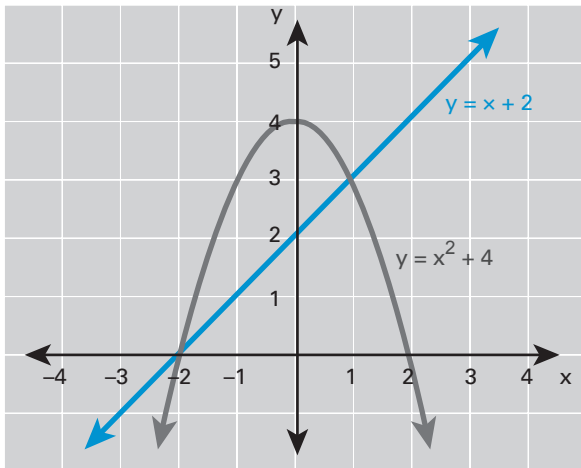
What is the value of  $x$ ?

☐ -1☐ 1☒ 2☐ -2**QUESTION 14**

SHADE ONE BOX



Which of these points is a point of intersection of these graphs?

☐ (3, 1)☐ (0, -2)☒ (1, 3)☐ (0, 2)**QUESTION 15**

WRITE YOUR OWN ANSWER

Most cookbooks provide a formula for calculating cooking times for different meats. When cooking roast turkey, one book suggests this formula:

$T = 50W + 25$  where  $T$  represents the cooking time (in minutes) and  $W$  represents the weight of the piece of the turkey (in kilograms).

What weight of turkey would cook in one hour?

0.7

 kg**QUESTION 16**

SHADE ONE BOX



What is the answer to  $9.9 \div 0.3$ ?

☐ 3.3☐ 0.033☐ 0.33☒ 33

**QUESTION 17**SHADE ONE BOX 

Four children have different pets. Using the clues below, work out who had the fish.

Bob's pet can't fly.

Cal's pet has hair, so does Deb's.

Deb's pet doesn't bark.

Use the table below to work out your answer.

|     | Bird | Cat | Dog | Fish |
|-----|------|-----|-----|------|
| Amy |      |     |     |      |
| Bob |      |     |     |      |
| Cal |      |     |     |      |
| Deb |      |     |     |      |

☐ Amy

☒ Bob

☐ Cal

☐ Deb
**QUESTION 18**SHADE ONE BOX 

Which set shows values equivalent to  $\frac{73}{125}$  out of 125?

☐ 58%,  $\frac{73}{125}$ , 0.584

☐  $\frac{584}{1000}$ , 5.84%, 0.0584

☒ 0.584,  $\frac{292}{500}$ , 58.4%

☐ 58.4%,  $\frac{73}{125}$ , 5.84
**QUESTION 19**SHADE ONE BOX 

In standard form,  $0.00065 = ?$

☐  $0.65 \times 10^{-3}$ 
☒  $6.5 \times 10^{-4}$ 
☐  $6.5 \times 10^{-3}$ 
☐  $6.5 \times 10^3$ 
**QUESTION 20**

WRITE YOUR OWN ANSWER

Roger buys seven postage stamps which cost a total of \$3.85.  
What is the cost of five of these postage stamps?

\$2.75

**QUESTION 21**

WRITE YOUR OWN ANSWER

$56 \times 84 = ?$

4704

### QUESTION 22



WRITE YOUR OWN ANSWER

The stem-and-leaf plot below shows data about reaction time of left- and right-handed students.

|                  |  |  |  |  |  |  |  |  |  |     |                  |  |  |  |  |  |  |  |  |  |
|------------------|--|--|--|--|--|--|--|--|--|-----|------------------|--|--|--|--|--|--|--|--|--|
| Mean: 0.43 sec   |  |  |  |  |  |  |  |  |  | 0.9 | Mean: 0.32 sec   |  |  |  |  |  |  |  |  |  |
| Median: 0.37 sec |  |  |  |  |  |  |  |  |  | 7   | Median: 0.31 sec |  |  |  |  |  |  |  |  |  |
|                  |  |  |  |  |  |  |  |  |  | 0.8 |                  |  |  |  |  |  |  |  |  |  |
|                  |  |  |  |  |  |  |  |  |  | 0.7 |                  |  |  |  |  |  |  |  |  |  |
|                  |  |  |  |  |  |  |  |  |  | 9   |                  |  |  |  |  |  |  |  |  |  |
|                  |  |  |  |  |  |  |  |  |  | 0.6 |                  |  |  |  |  |  |  |  |  |  |
|                  |  |  |  |  |  |  |  |  |  | 0.5 |                  |  |  |  |  |  |  |  |  |  |
|                  |  |  |  |  |  |  |  |  |  | 6   |                  |  |  |  |  |  |  |  |  |  |
|                  |  |  |  |  |  |  |  |  |  | 0.4 |                  |  |  |  |  |  |  |  |  |  |
|                  |  |  |  |  |  |  |  |  |  | 0.3 |                  |  |  |  |  |  |  |  |  |  |
|                  |  |  |  |  |  |  |  |  |  | 0.2 |                  |  |  |  |  |  |  |  |  |  |
|                  |  |  |  |  |  |  |  |  |  | 0.1 |                  |  |  |  |  |  |  |  |  |  |
|                  |  |  |  |  |  |  |  |  |  | 0.0 |                  |  |  |  |  |  |  |  |  |  |

Left-handed

Right-handed

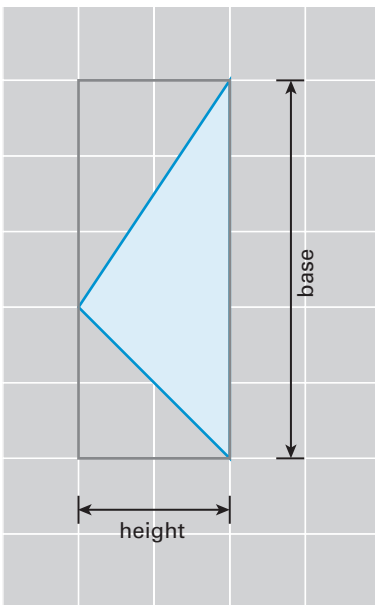
True or false? This data suggests that right-handed students have a faster reaction time than left-handed students.

True

### QUESTION 23



WRITE YOUR OWN ANSWER



What is the area of this triangle? Each grid is 1 cm by 1 cm.

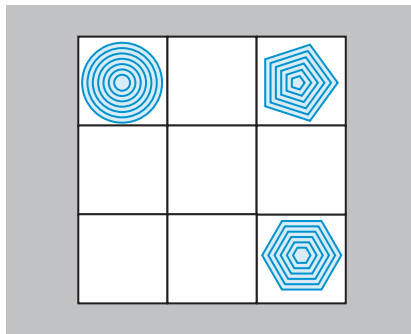
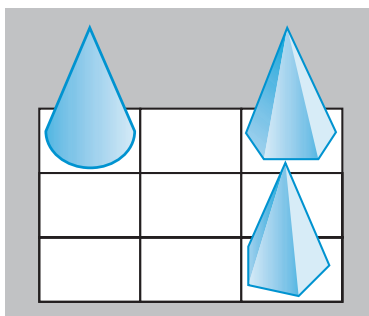
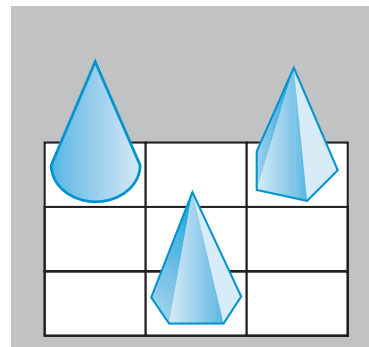
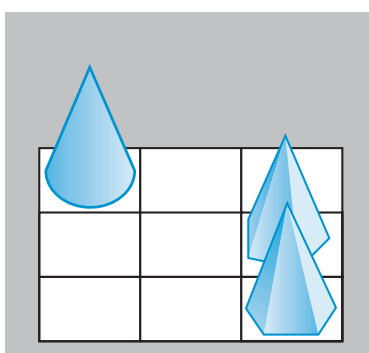
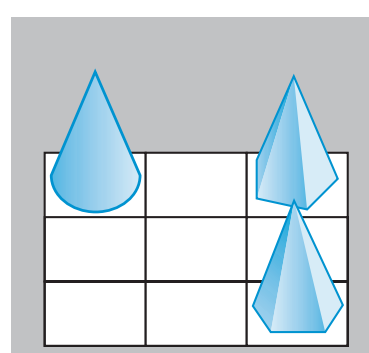
5 cm<sup>2</sup>

### QUESTION 24

SHADE ONE BOX

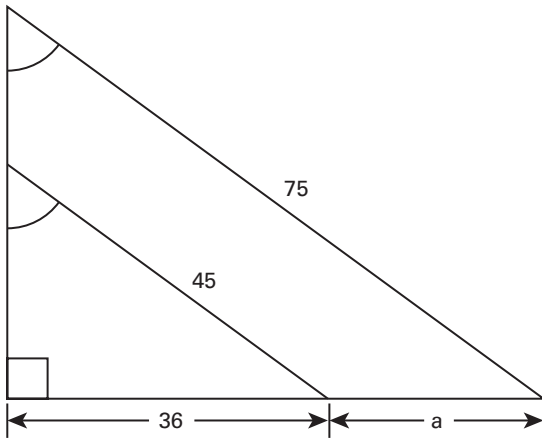


Which of the four arrangements of geometric solids matches this contour map?


☐

☐

☐

☒


### QUESTION 25

SHADE ONE BOX



What is the value of  $a$ ?

☐ 64

☐ 60

☒ 24

☐ 34

### QUESTION 26

SHADE ONE BOX



$$1^2 + 2^3 + 3^4 = ?$$

☐ 20

☐ 36

☒ 90

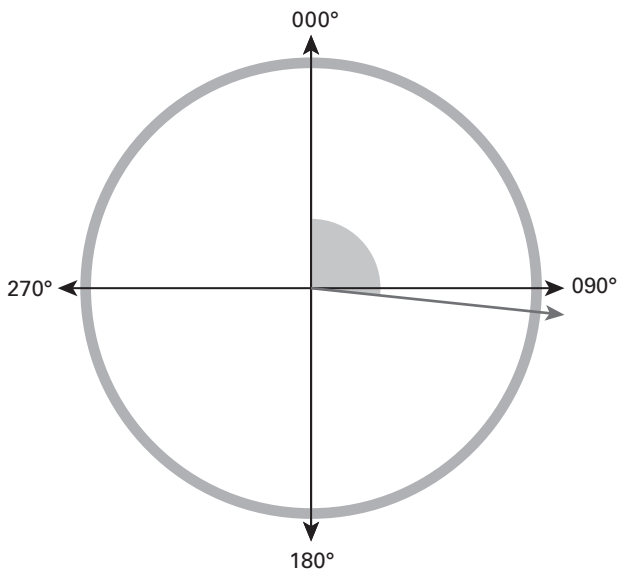
☐ 324

### QUESTION 27

SHADE ONE BOX



Which of the following is the best estimate of the size of the true bearing shown in the diagram?



☐ 010°

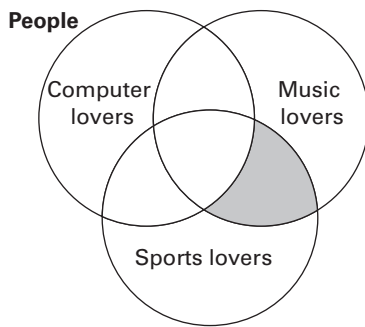
☒ 095°

☐ 085°

☐ 005°

## QUESTION 28

Which of the following statements best describes the shaded area in this Venn diagram?



- ☒ people who love sports and music
- ☐ people who love music and computers
- ☐ people who love computers and sports
- ☐ people who love computers and music

## QUESTION 29



WRITE YOUR OWN ANSWER

A packet of eight fruit buns costs \$4.70. A packet of 12 fruit buns costs \$6.30. Leila needs to buy 44 fruit buns. What is the least amount she could pay for the fruit buns?

\$23.60

## QUESTION 30



WRITE YOUR OWN ANSWER

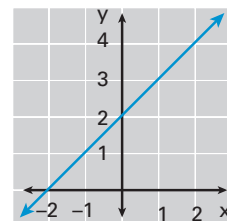
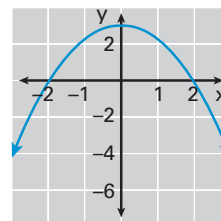
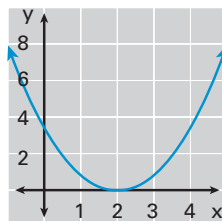
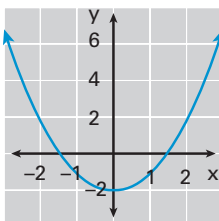
A 10 m by 18 m function room is to be used by the Year 9 social committee for a disco. A portable dance floor is to be installed to allow 6 m by 8 m of dance space. What percentage of the floor space is set aside for dancing? Write your answer to include a fraction.

$26\frac{2}{3}$  %

## QUESTION 31

SHADE ONE BOX

The graph of  $y = x^2 - 2$  is most like which of the following graphs?



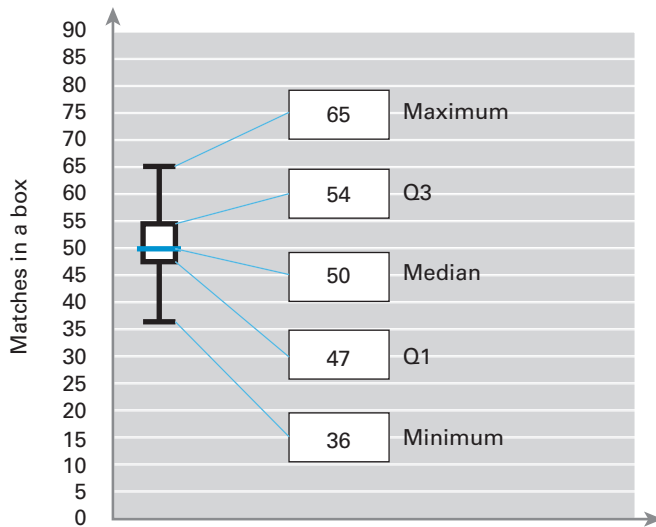


### QUESTION 32

SHADE ONE BOX



A quality-control engineer takes a random sample of 100 boxes of matches to check the claim that there are between 40 and 60 matches in each box. He displays his data in a box plot.



Which of the following statements is true about this box plot?

- ☒ Half of the boxes have between 47 and 54 matches.
- ☐ No box holds less than 47 matches.
- ☐ The mean number of matches in a box is 50.
- ☐ Three-quarters of the match boxes hold less than 65 matches.