




Student Name			
Gender		Date of Birth	
Subject	MATHEMATICS	Student ID	N0005
School Name	TOWHEED IRANIAN SCHOOL		
Grade	07	Section	
 168-M-N0005-07-1 2071			



Mathematics

TEST INSTRUCTIONS

FILL IN YOUR DETAILS

Turn to your ANSWER SHEET and fill in your name, school, grade, section, today's date, your date of birth and gender.

ANSWERING QUESTIONS

Go to the MATHEMATICS ANSWER SHEET.



This test has **45 QUESTIONS**. Each question has four possible options.

Choose the **BEST** answer from the four options, **A, B, C** or **D**.

FILL in **ONE** circle on your answer sheet with a pencil.

If you make a mistake, erase the pencil mark and fill in a different circle.

You must colour the entire circle as shown below:

Correct response 	Incorrect responses 
	Line Very light pencil Pen Colored pencil

Marks are NOT deducted for incorrect answers.

ALL ANSWERS SHOULD BE MARKED ON YOUR ANSWER SHEET ONLY.

EQUIPMENT ALLOWED IN THIS TEST

You may use a 2B or B pencil for this test. You may NOT use a calculator for this test.

TIME ALLOWED FOR TEST

The time allowed to complete this test is **60 minutes**.

1 A fair dice has:

- three black faces
- two white faces
- one red face.

The dice is rolled once.

What is the probability of getting **either** a black **or** a white face?

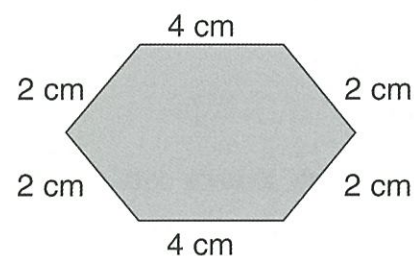
$\frac{1}{5}$
A

$\frac{1}{3}$
B

$\frac{2}{3}$
C

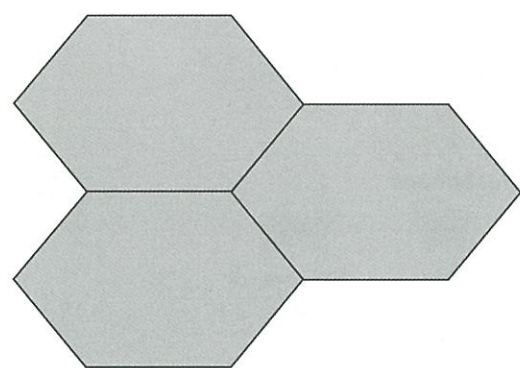
$\frac{5}{6}$
D

2 A student has identical hexagons like this.



not to scale

He joins three of these hexagons together, with no overlap, to make a new shape like this.



What is the perimeter of the new shape?

32 cm
A

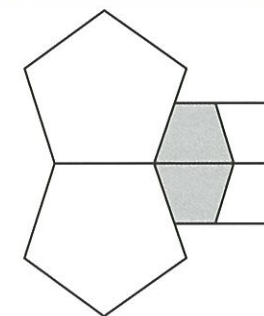
40 cm
B

48 cm
C

56 cm
D

43 Which shape is **not** in this design?

- A rectangle
- B pentagon
- C trapezium
- D parallelogram



44 Irene and Joan went shopping for the same brands of shampoo and hand cream. The pictures show what they bought and how much they paid.



What was the cost of one shampoo?

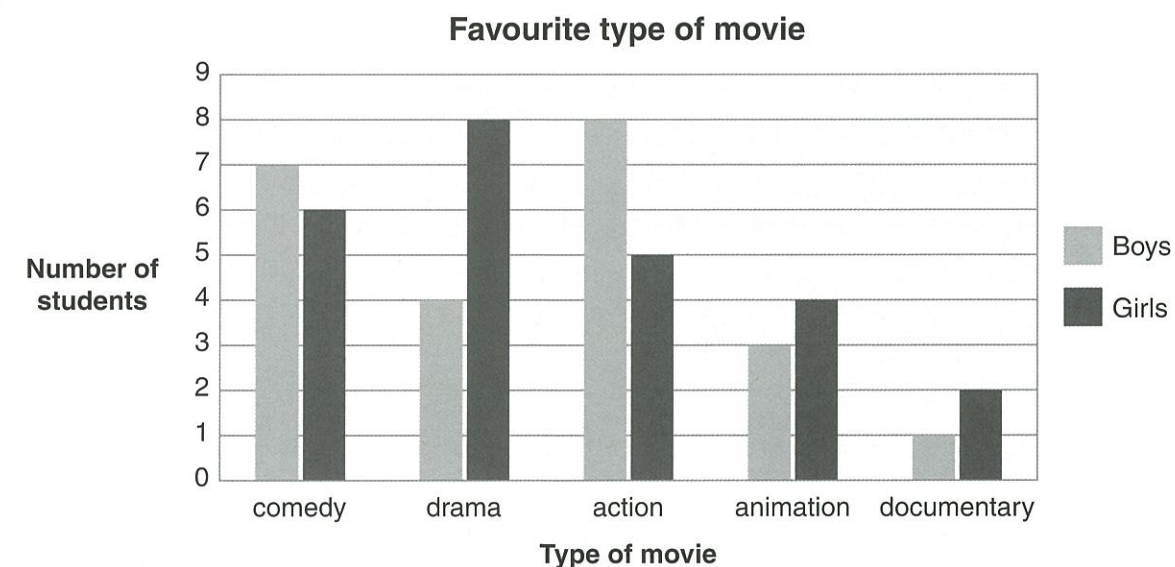
10 dollars
A

15 dollars
B

20 dollars
C

30 dollars
D

45 A group of students were surveyed about their favourite type of movie.



How many more girls than boys were surveyed?

1
A

2
B

6
C

10
D

39 $-25 \times 5 =$

-125

A

-20

B

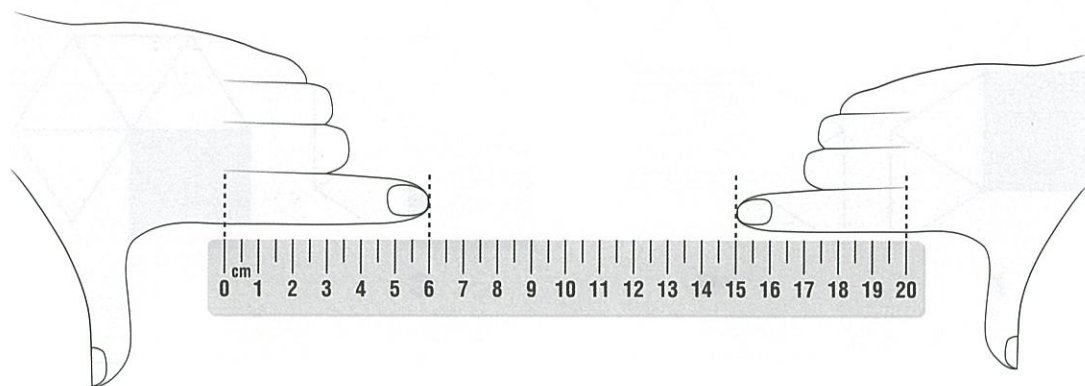
20

C

125

D

40 Two students measure their index fingers using a 20 cm ruler.



What is the difference in the lengths of their index fingers?

1 cm

A

6 cm

B

9 cm

C

11 cm

D

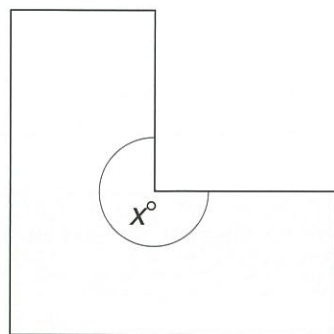
41 What is the size of the angle marked x ?

A 90 degrees

B 180 degrees

C 270 degrees

D 315 degrees



42 How much juice is in this jug?

A 300 mL

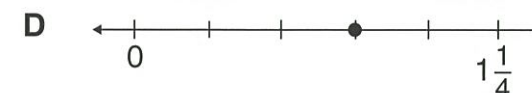
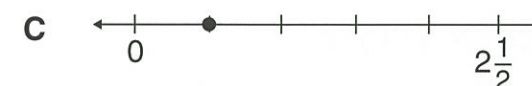
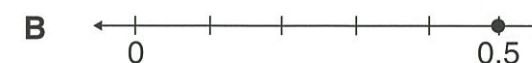
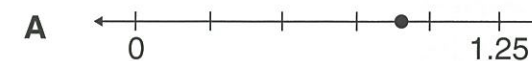
B 500 mL

C 600 mL

D 800 mL



3 On which number line does the dot show the largest number?



4 This is a diagram of a rectangular garden.

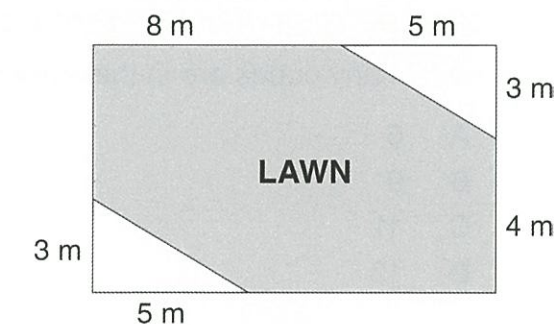
What is the area of the lawn?

A 17 m^2

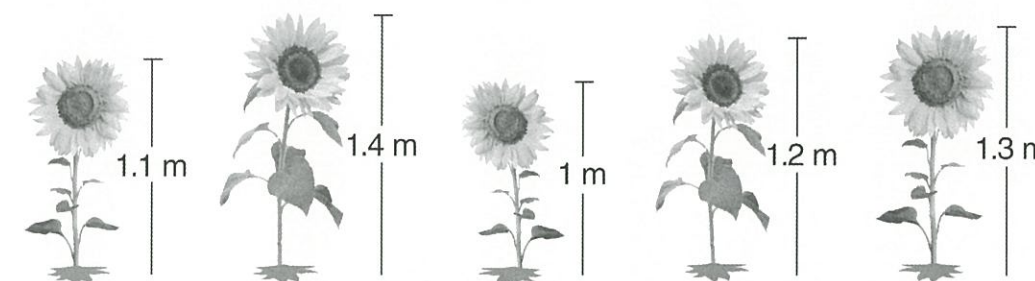
B 32 m^2

C 61 m^2

D 76 m^2



5 The average (mean) height of these flowers is 1.2 m.



The shortest flower is removed.

What is the effect on the average height of the remaining flowers?

A the average height increases

B the average height stays the same as before

C the average height decreases

D the average height cannot be predicted

6 This table shows the cost of hiring different vehicles.

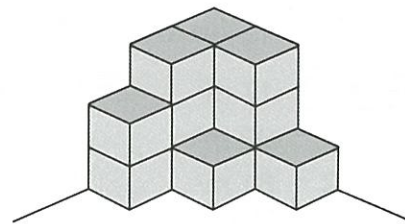
Vehicle	Maximum number of people allowed	\$ per day
Small	2	50
Medium	5	60
Large	7	80

What is the cost of hiring a vehicle for 6 people for 3 days?

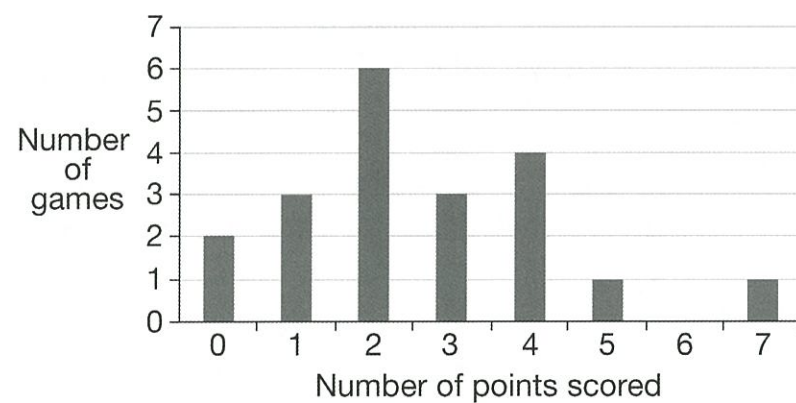
- \$18 \$80 \$180 \$240
A **B** **C** **D**

7 Identical cubes are stacked on top of each other in the corner of a room. How many cubes are in the stack?

- A** 6
B 9
C 11
D 13



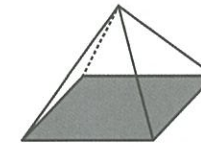
8 This chart shows the points scored by a polo player in 20 different games.



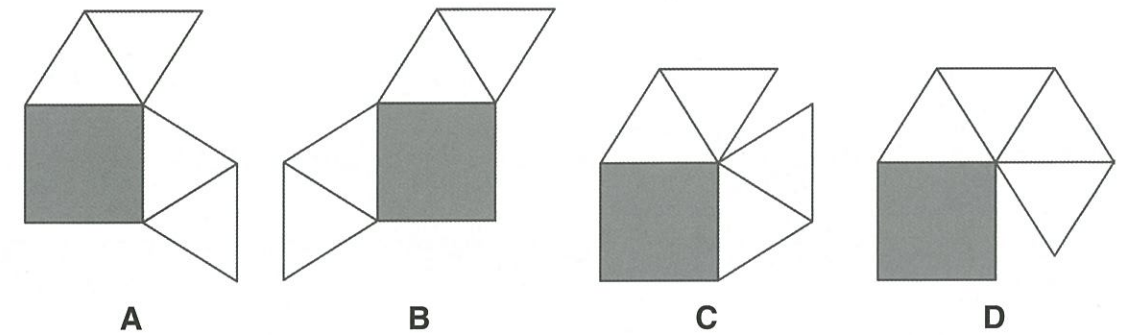
How many points did the player score altogether?

- 20 22 44 52
A **B** **C** **D**

36 This is a square-based pyramid.



Which of these is a net of this pyramid?



37 Which of these numbers is the largest?

- 3.2 3.154 3.0007 3.00125
A **B** **C** **D**

38 The table shows the number of tourists, of four different nationalities, who visited South Africa's national parks in 2010 and 2011.

Top 4 nationalities	Number of tourists	
	2010	2011
German	134 000	132 000
British	64 000	56 000
Dutch	50 000	39 000
French	43 000	35 000

Which nationality showed the greatest decrease in the number of tourists from 2010 to 2011?

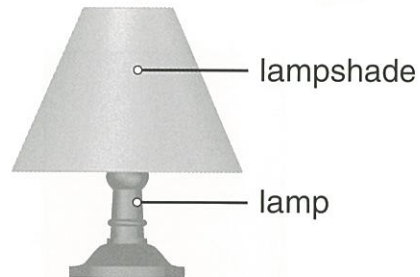
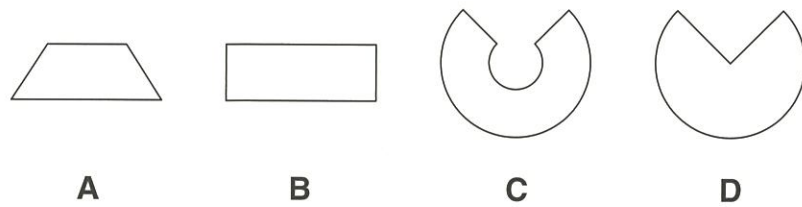
- German British Dutch French
A **B** **C** **D**

- 32** A student has \$ x .
He spends one-third of his money.
He now has \$42 remaining.
Which equation matches this description?

$x = 42 - \frac{x}{3}$ $\frac{x-3}{42} = x$ $x - 42 = 3x$ $x - \frac{x}{3} = 42$
A **B** **C** **D**

- 33** How many centimetres is 2350 mm?
A 2.35 cm
B 23.5 cm
C 235 cm
D 23500 cm

- 34** What shape of paper is needed to form the lampshade?

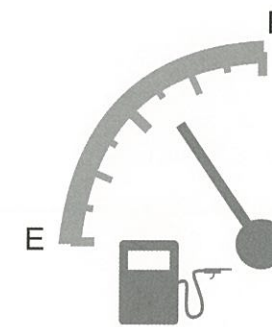


- 35** Rafal and Nick ran in a charity fun run.
Rafal's time was 59 minutes and 56 seconds.
Nick's time was 1 hour 0 minutes and 17 seconds.
How many seconds ahead was Rafal?
A 21 seconds
B 39 seconds
C 41 seconds
D 61 seconds



- 9** What is 3^4 equal to?
A 3×4
B $4 + 4 + 4$
C $3 + 3 + 3 + 3$
D $3 \times 3 \times 3 \times 3$

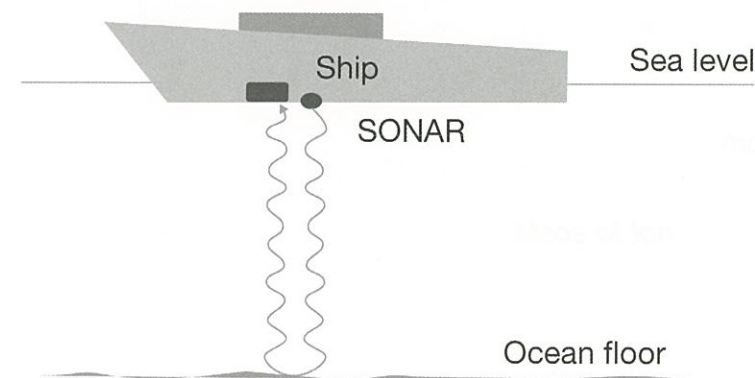
- 10** A car starts a journey with a full tank of fuel.
After 180 kilometres the display shows this reading.



About how many more kilometres can the car be driven on this tank of fuel?

- 108 180 270 300
A **B** **C** **D**

- 11** A SONAR on a ship sends a signal to the ocean floor and receives the reflected signal.
The speed of the signal in water is 1400 metres per second.
The ocean floor is 7 kilometres below the ship.

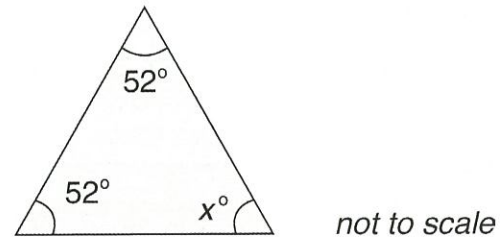


How long will the signal take to go to the ocean floor and come back to the ship?

- 0.2 seconds 5 seconds 10 seconds 100 seconds
A **B** **C** **D**

12 What is the value of angle x ?

- A 38
- B 52
- C 76
- D 86



13 $6(a + 3)$ is equivalent to

- A $6a + 3$
- B $6 + a + 3$
- C $a + 18$
- D $6a + 18$

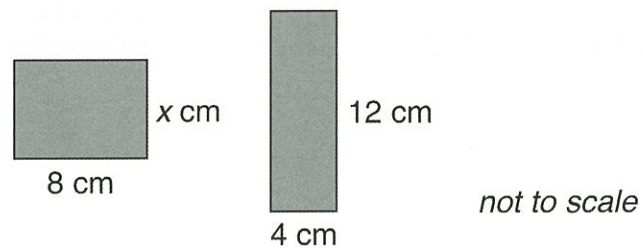
14 A coin weighs 5 grams.

It is made of 75% copper and 25% nickel.

How many grams of copper are in the coin?

- A 0.75 grams
- B 1.25 grams
- C 3.75 grams
- D 4.25 grams

15 These rectangles have the same area.



What is the value of x ?

- A 6
- B 8
- C 10
- D 24

29 $0.0243 \times \square = 24.3$

What should go in the \square to make the equation true?

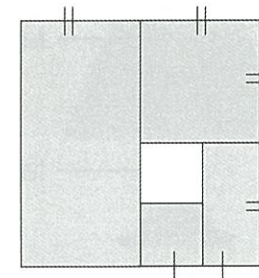
- A 0.001
- B 0.01
- C 100
- D 1000

30 A fair dice is rolled once.

What is the probability of getting a 5 or 6?

- A $\frac{1}{3}$
- B $\frac{1}{5}$
- C $\frac{1}{6}$
- D $\frac{1}{11}$

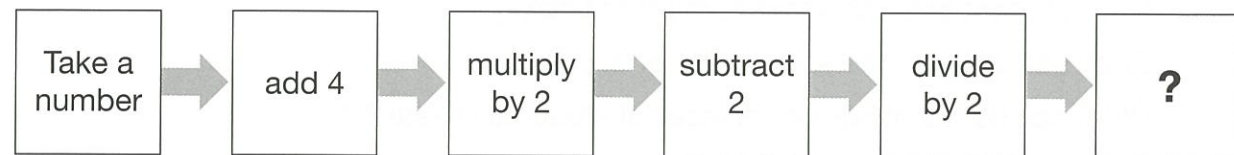
31 In this diagram of a square shape, similar markings show equal lengths.



What fraction of the shape is shaded?

- A $\frac{3}{4}$
- B $\frac{4}{5}$
- C $\frac{7}{8}$
- D $\frac{15}{16}$

26 Follow these instructions:



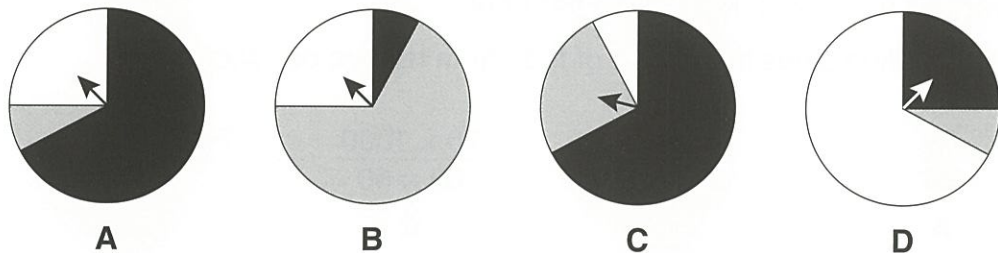
What answer will you get if you start with -5 ?

- 8 -2 0 2
A **B** **C** **D**

27 This table shows the chance of each outcome for a spinner.

Outcome	Chance
Black	2 in 3
Grey	1 in 12
White	1 in 4

Which of these spinners matches the information in the table?

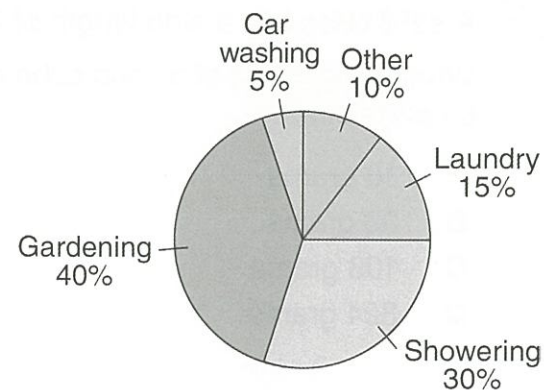


28 This pie chart shows the water used by a household on Sunday.

The household used a total of 400 litres on Sunday.

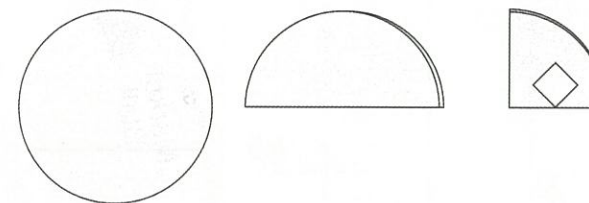
How much water was used for Laundry?

- A** 15 litres
B 60 litres
C 400 litres
D 6000 litres



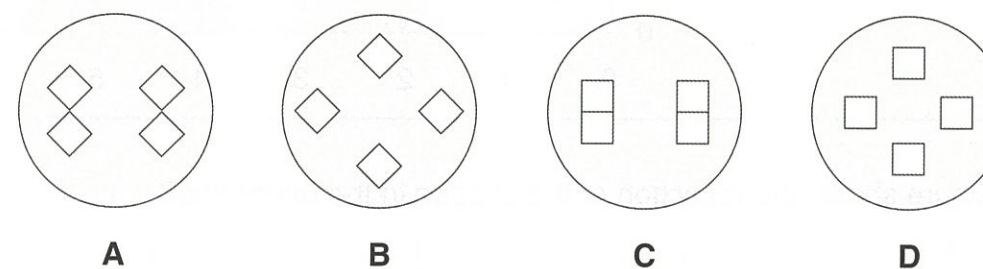
16 A circular paper is folded in half.

It is folded in half again, and a small square is cut from the middle of the bottom edge.



The circular paper is unfolded.

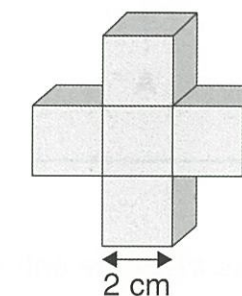
How will the unfolded paper look?



17 This object is made from 5 cubes of the same size.

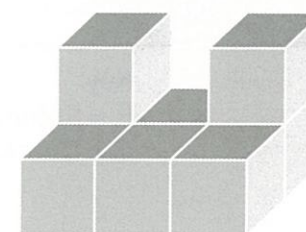
What is the total surface area of the object?

- A** 40 square centimetres
B 88 square centimetres
C 100 square centimetres
D 120 square centimetres



18 This model is made by gluing together 8 cubes.

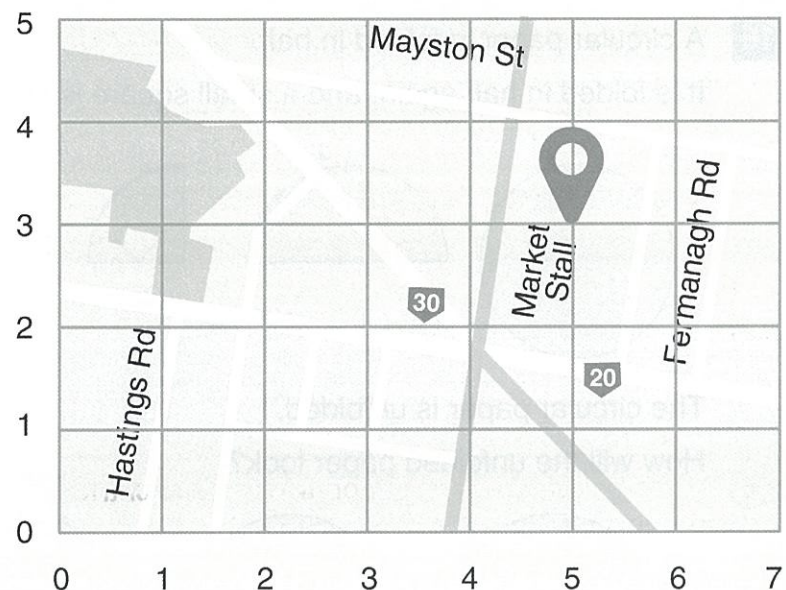
Each cube is a cubic centimetre.



What is the outside surface area of the model, **including** the base?

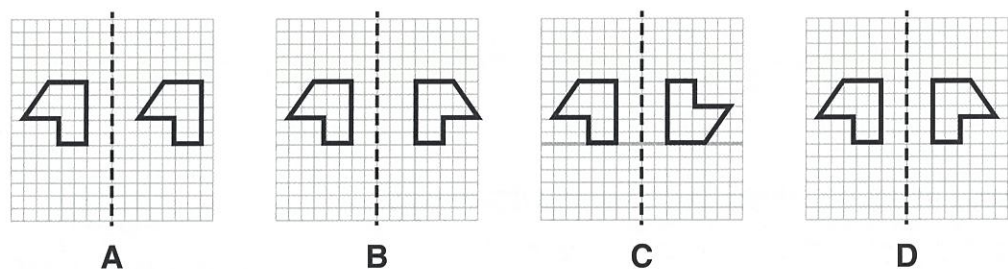
- 15 cm² 30 cm² 42 cm² 48 cm²
A **B** **C** **D**

- 19** The marker shows the location of Allan's home on the map.
What are the coordinates of Allan's home?

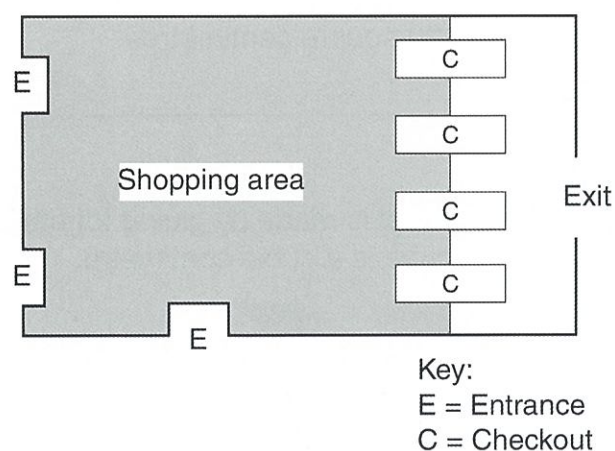


- A (5, 3)
- B (3, 5)
- C (5, 7)
- D (2, 3)

- 20** Which picture shows the reflection of the shapes in the mirror line?



- 21** There are three entrances into a shop. There are four checkouts to pay for the purchases.
How many different ways are there for a customer to enter the shop and pay at a checkout?



- A 1
- B 3
- C 7
- D 12

- 22** Teachers share 250 books and 350 pencils between the students in Year 6. Each student gets the same number of books. Each student gets the same number of pencils. What can be the maximum number of students in Year 6?

- | | | | |
|----------|----------|----------|----------|
| 10 | 25 | 35 | 50 |
| A | B | C | D |

- 23** The highest temperature on the surface of the Moon is 100 °C and the lowest temperature is -173 °C. What is the difference between these two temperatures?

- | | | | |
|----------|----------|----------|----------|
| 73 °C | 127 °C | 173 °C | 273 °C |
| A | B | C | D |

- 24** The speed of a car is 70 kilometres per hour. Which calculation gives the speed of the car in metres per second?

- | | | | |
|-----------------|---------------------------|---------------------------------------|---------------------------------------|
| $\frac{70}{60}$ | $\frac{70}{60 \times 60}$ | $\frac{70 \times 1000}{60 \times 60}$ | $\frac{70 \times 60 \times 60}{1000}$ |
| A | B | C | D |

- 25** A solid cube has a side length of 2 centimetres. It has a mass of 12 grams. What is the mass of a solid cube of the same material with a side length of 6 centimetres?

- A 16 grams
- B 36 grams
- C 108 grams
- D 324 grams