

Year 7 NUMERACY

Non-calculator

Test 3

INSTRUCTIONS TO STUDENTS



Use a 2B pencil to show your answers.



For the multiple-choice questions, show your answer by shading the matching bubble. If you make a mistake, erase the shading and shade the correct bubble.



For the other questions, write your answer in the box provided. If you make a mistake, erase it and write the correct answer.

1 What is the rule to continue this decimal number pattern?



subtract 0.2

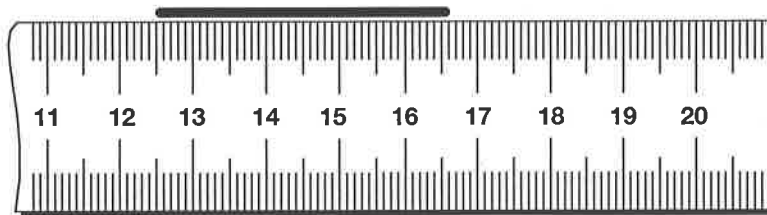
subtract 0.4

add 0.2

add 0.4



2 This ruler was used to measure the length of the line in centimetres.



Approximately how long is the line?

2.1 cm

3.1 cm

4.1 cm

4.6 cm

3 Which of these expressions has the same value as 12×9 ?

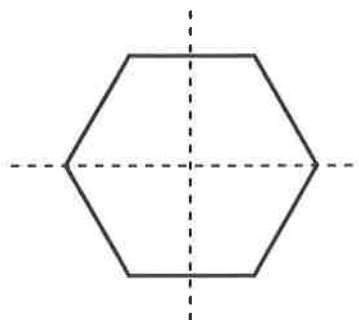
$9 + 10 + 2$

$9 \times 10 + 2$

$(9 + 2) \times 10$

$(10 + 2) \times 9$

4 A hexagon is cut in quarters as shown.



The shape of each quarter is a:

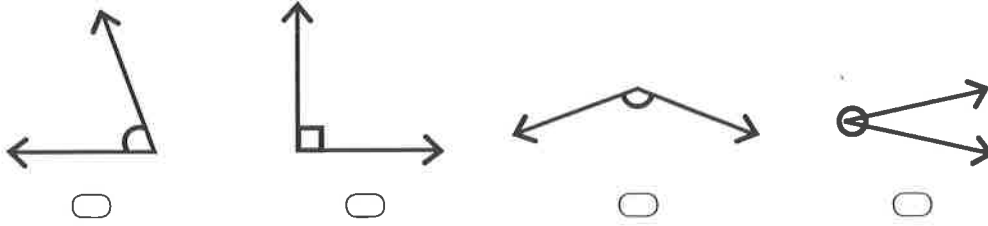
rectangle

hexagon

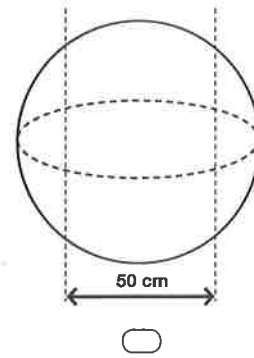
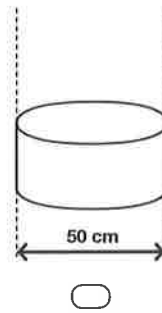
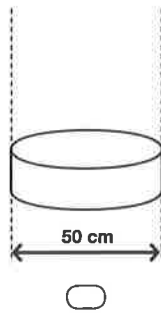
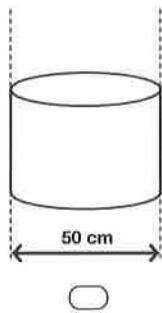
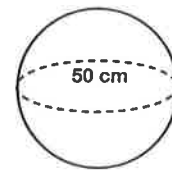
trapezium

pentagon

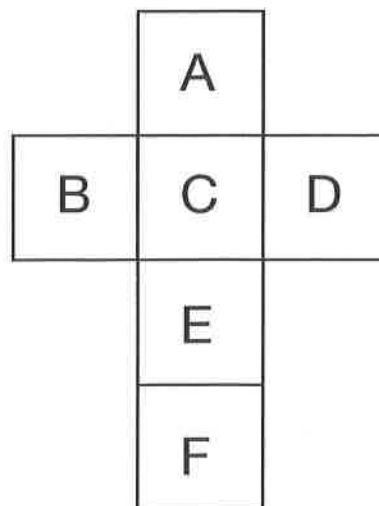
5 Which of the following shows a reflex angle?



6 Which of the following pieces of plasticine is likely to have used the same amount of plasticine as this ball?



7 Heidi folded this net to make a cube.



Which face is opposite face C?

- 8 A positive number is multiplied by itself and then 5 subtracted.
The answer is 20.
What is the number?



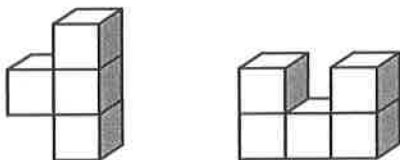
- 9  L cm
6 cm not to scale

The area of the shaded rectangle is 72 cm^2 .
What is the length of the shaded rectangle?

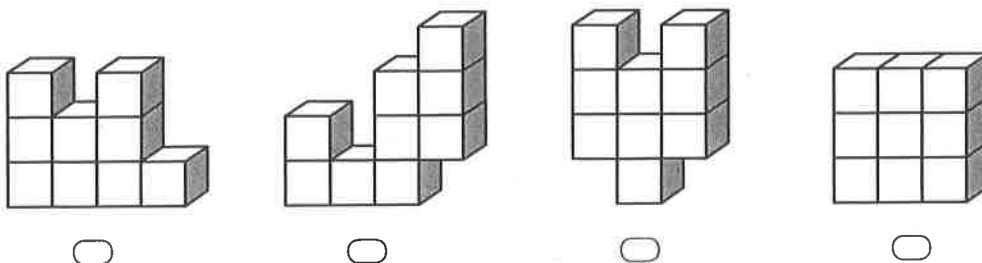
 cm

- 10 Write down the coordinates of the next point in the following pattern:
(1,0), (1,1), (1,2), (1,3), ...

- 11 Sam made these two objects by gluing cubes together.



Which object below could **not** be made by joining Sam's two objects?



- 12 A bag contains 12 red, 3 green and 5 blue balls.
Without looking, Suri takes a ball from the bag.
What is the chance that the ball is blue?



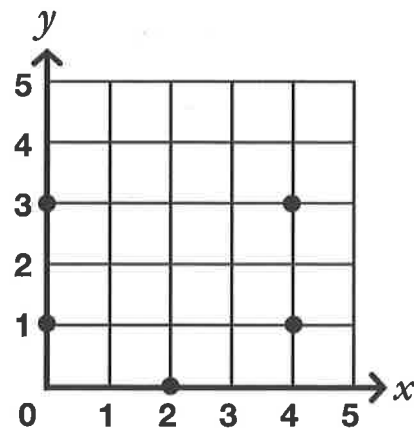
$$\frac{1}{5}$$

$$\frac{1}{4}$$

$$\frac{1}{3}$$

$$\frac{1}{2}$$

- 13 Kath is drawing a symmetrical hexagon on this grid.
Five points are shown.



Where could the sixth corner be?

$$(0,4)$$

$$(2,1)$$

$$(2,4)$$

$$(2,5)$$

- 14 There are 12 novels and 6 magazines on a shelf.
What fraction of the items on the shelf are novels?

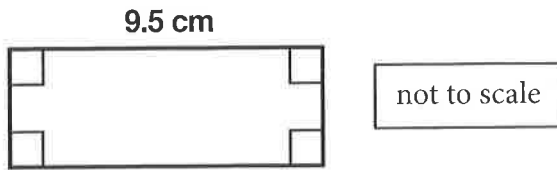
$$\frac{1}{6}$$

$$\frac{1}{4}$$

$$\frac{1}{3}$$

$$\frac{2}{3}$$

- 15 A rectangular card has a perimeter of 23.6 cm.
Each long side has length 9.5 cm.



What is the length of each short side?



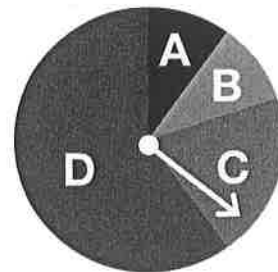
- 16 Bea has four \$1 coins.
One of the coins is **not** real.
It is heavier than a real coin.



Which is the counterfeit coin?

- A B C D

- 17 Ben spins the arrow 200 times.



Which table is **most likely** to show his results?

Sector	Number of spins	Sector	Number of spins	Sector	Number of spins	Sector	Number of spins
A	40	A	40	A	20	A	50
B	40	B	40	B	20	B	50
C	80	C	40	C	40	C	50
D	40	D	80	D	120	D	50

-

18 A team scored 30 points in a netball match.

The table shows the numbers of points scored by 4 of the 5 players.

Player	Anne	Bev	Chris	Diane	Emmy
Points	6	10	4	4	?



What **percentage** of the points were scored by Emmy?

6%

20%

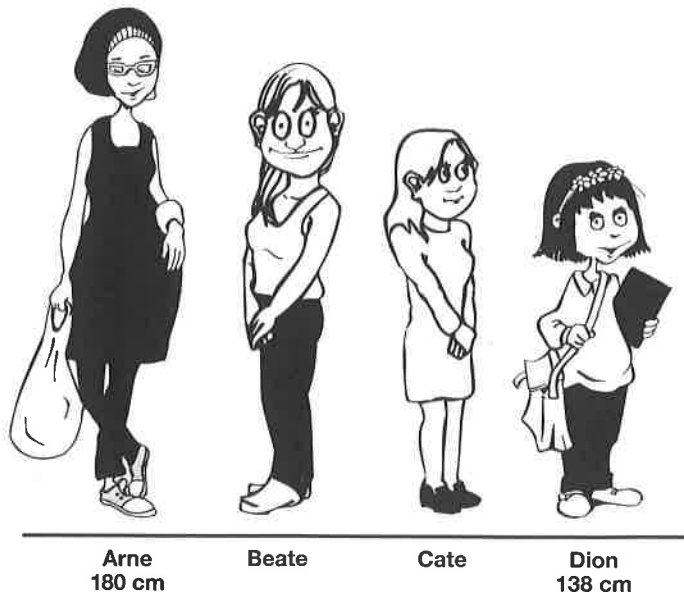
24%

80%

19 Arne, Beate, Cate and Dion stand in order of height.

Cate is 6 cm taller than Dion.

Beate's height is halfway between Arne's and Cate's.



What is Beate's height?

138 cm

156 cm

162 cm

171 cm

20 I am a quadrilateral with no parallel sides.

My diagonals intersect at right angles and one pair of opposite angles are equal.

What am I?

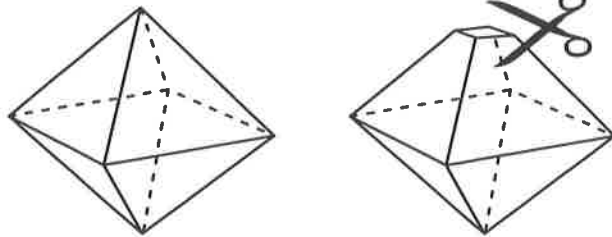
parallelogram

rhombus

kite

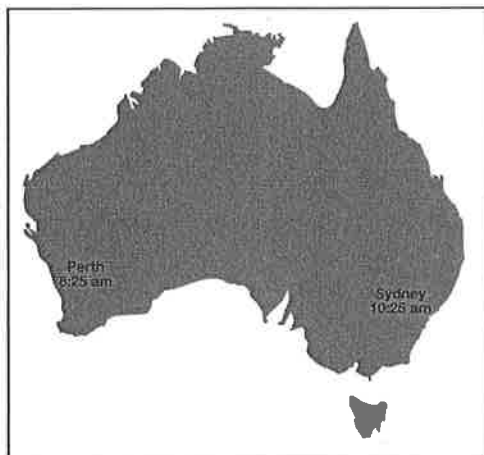
trapezium

21 Melina cut one point off an octahedron as shown.



How many edges does the object now have?

22 This map shows the time difference between Perth and Sydney on the same day.



If it is 11:30 pm on Saturday in Perth, what time is it in Sydney?

9:30 pm Sunday 9:30 pm Saturday 1:30 am Sunday 1:30 am Saturday

23 \square and \blacklozenge stand for numbers.

\square and \blacklozenge are related by a rule.

What is the rule?

$\blacklozenge = 10 \times \square - 7$

$\blacklozenge = 6 \times \square + 1$

$\blacklozenge = 2 \times \square \times \square + 5$

$\blacklozenge = 3 \times \square \times \square + 1$

\square	\blacklozenge
2	13
3	23
4	37
5	55

24 The distances (in km) from Paris to 5 other European cities are shown in the table.



	Amsterdam	London	Brussels	Luxembourg	Le Havre
Paris	514	414	294	379	211

The distance from Paris to Amsterdam is about 200 km further than the distance from:

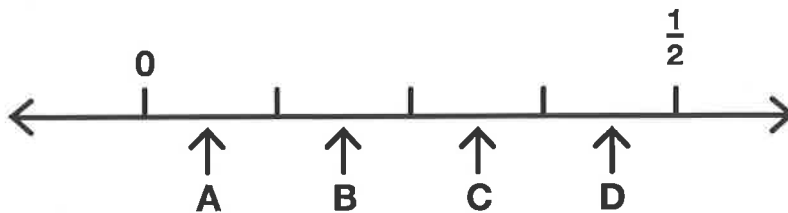
Paris to London

Paris to Brussels

Paris to Luxembourg

Paris to Le Havre

25 A number line is shown.



The point that is closest to the location of $\frac{1}{16}$ on the number line is:

A

B

C

D

26 What fraction is half way between $\frac{3}{5}$ and $\frac{4}{5}$?



27 The temperature of the icecream in a dessert is -25°C .

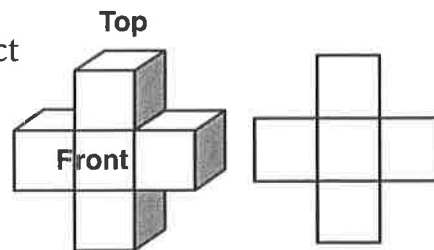
The temperature of the custard is 33°C warmer than the temperature of the icecream.

What is the temperature of the custard?

$^{\circ}\text{C}$

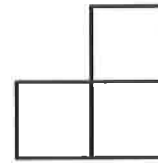
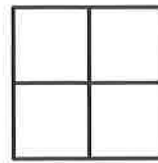
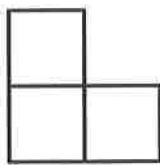


28 Ali makes a 3D (three-dimensional) object out of cubes joined face-to-face.

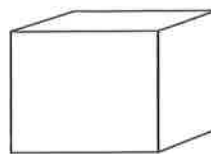
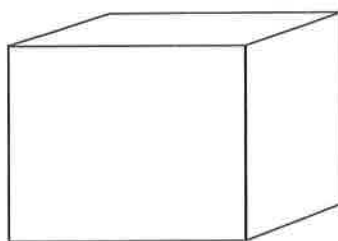


He then draws a front view of his object.

Which of the following is the top view?



29 The dimensions of the small box are half the dimensions of the large box.



not to scale

Both boxes are rectangular prisms.

The volume of the large box is 8 cm^3 .

What is the volume of the small box?

1 cm^3

4 cm^3

8 cm^3

16 cm^3

30 Which set of fractions is ordered from largest to smallest?

- $\frac{2}{11}, \frac{2}{3}, \frac{5}{9}, \frac{1}{6}$
- $\frac{2}{11}, \frac{1}{6}, \frac{2}{3}, \frac{5}{9}$
- $\frac{5}{9}, \frac{2}{11}, \frac{1}{6}, \frac{2}{3}$
- $\frac{2}{3}, \frac{5}{9}, \frac{2}{11}, \frac{1}{6}$



31 Gary rolled a die 25 times. The results were as follows.

6	2	4	3	3
5	4	3	4	1
3	4	5	2	2
2	4	4	2	1
5	5	2	3	4



What percentage of the rolls resulted in a 2?

 %

32 This clock shows 10 minutes to 2.



The size of the **smaller** angle between the minute and hour hands is about:

 °