MINISTERIAL COUNCIL ON EDUCATION,
EMPLOYMENT, TRAINING AND YOUTH AFFAIRS

NATIONAL ASSESSMENT PROGRAM
LITERACY AND NUMERACY

NUMERACY
NON-CALCULATOR

YEAR
7
2009

SESSION 2

0:40

Time available for students
to complete test: 40 minutes

Use 2B or HB
pencil only

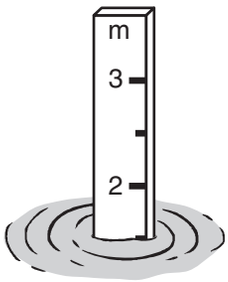
1 3.25, 3.0, 2.75, 2.5, 2.25, ...

Shade one bubble.

What is the rule to continue this decimal number pattern?

- ⬭ increase by 0.5
- ⬭ increase by 0.25
- ⬭ decrease by 0.5
- ⬭ decrease by 0.25

2 This pole measures the depth of water in a river.



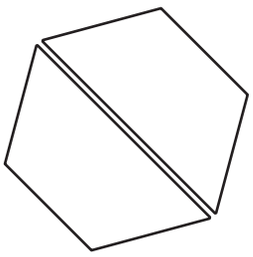
Approximately how deep is the river?

15 centimetres	1.05 metres	1.5 metres	15 metres
⬭	⬭	⬭	⬭

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

$10 + 3 + 2$	$10 \times 3 + 2$	$10 \times 3 + 3$	$10 \times 3 + 6$
⬭	⬭	⬭	⬭

4 A regular hexagon is cut in half like this.

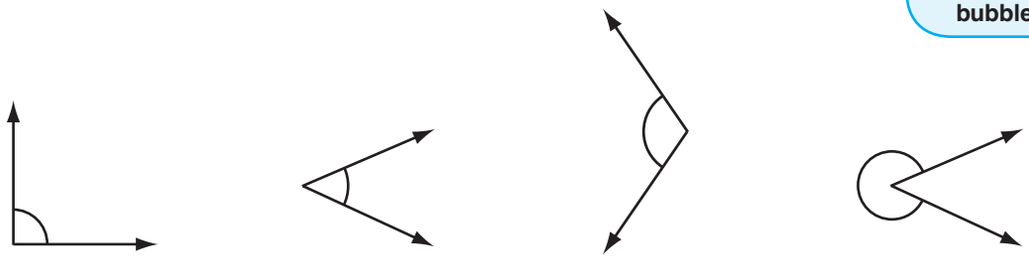


The shape of each half is a

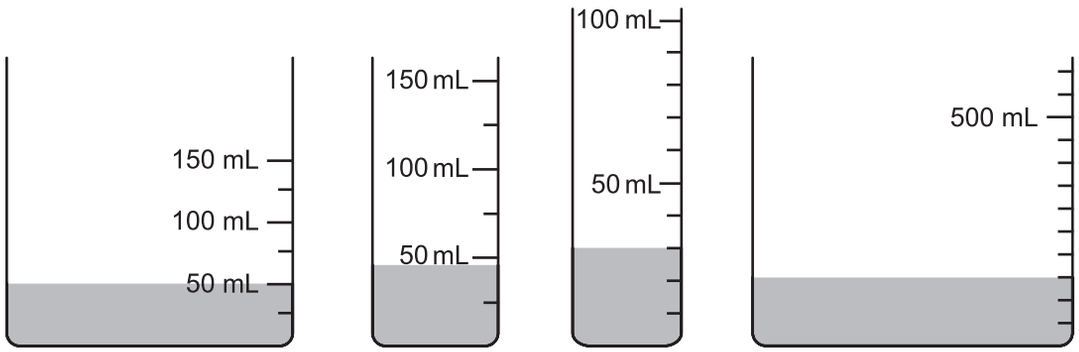
rectangle.	pentagon.	hexagon.	trapezium.
⬭	⬭	⬭	⬭

5 Which shows a **reflex** angle?

Shade one bubble.

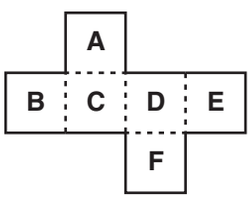


6 Which container has the **least** liquid?



7 Hannah folds this net to make a cube.

Write your answer in the box.



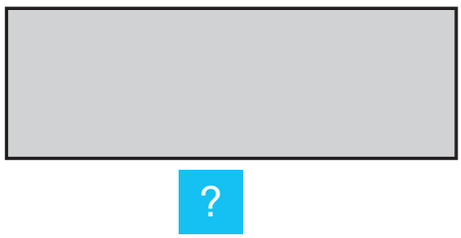
Which face is opposite face C?

8 A number is multiplied by itself and then 9 is added.
The answer is 13.

What is the number?

9 The area of this shaded rectangle is 98 cm^2.

Write your answer in the box.

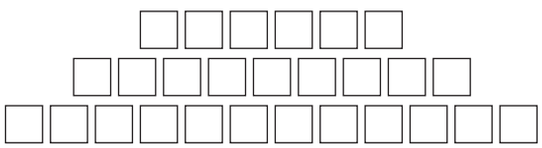


What is the length of the shaded rectangle?

_____ cm

10 The seating plan for a hall makes this pattern.

Shade one bubble.

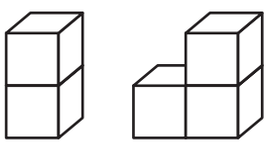


KEY
1 seat

If the pattern continues, how many seats are in Row 6?

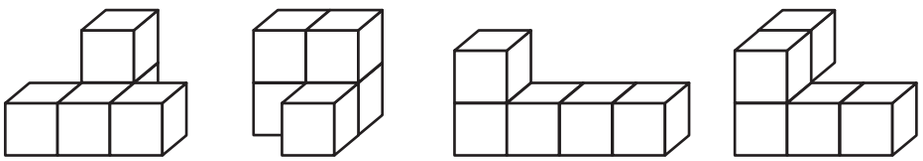
6	15	18	21
⬭	⬭	⬭	⬭

11 Kevin made these 2 objects by gluing cubes together face-to-face.



He then joined the 2 objects together.

Which object below could **not** be made using Kevin's 2 objects?



⬭ ⬭ ⬭ ⬭

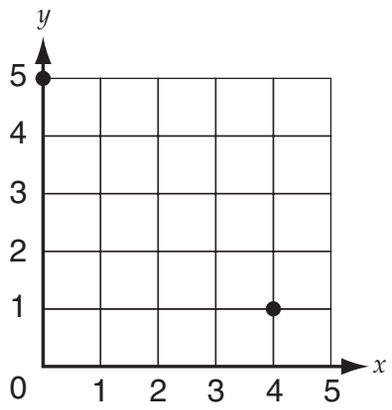
12 A tin contains 15 green, 10 red, 7 black and 18 white jelly beans.
Without looking, Jen takes one jelly bean from the tin.

Shade one bubble.

What is the chance that the jelly bean is red?

$\frac{1}{2}$ ⬭ $\frac{1}{3}$ ⬭ $\frac{1}{4}$ ⬭ $\frac{1}{5}$ ⬭

13 Max is drawing a square on this grid.
He has drawn two corner points as shown.



Max makes (4, 5) the third corner.

Where will the fourth corner be?

(0, 1) ⬭ (1, 0) ⬭ (0, 5) ⬭ (1, 1) ⬭

14 Helen has 24 red apples and 12 green apples.

What fraction of the apples are green?

$\frac{1}{2}$ ⬭ $\frac{1}{3}$ ⬭ $\frac{1}{4}$ ⬭ $\frac{1}{12}$ ⬭

15 A rectangular paddock has a perimeter of 50 metres.
Each long side has a length of 15 metres.

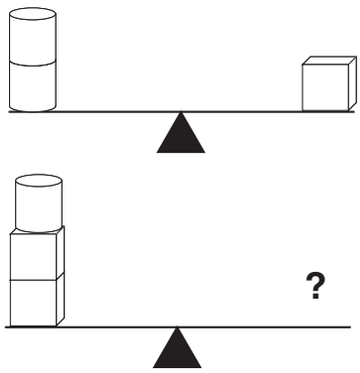
Write your answer in the box.

What is the length of each short side?

☐ metres

16 The first balance shows that 2 cans have the same mass as 1 block.

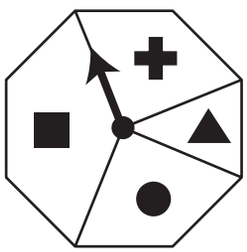
Shade one bubble.



How many **cans** balance 2 blocks and 1 can?

3 ⬭ 4 ⬭ 5 ⬭ 6 ⬭

17 Voula spins the arrow 100 times.



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

Shape section	Number of spins
✚	15
▲	10
●	15
■	60

⬭

Shape section	Number of spins
✚	10
▲	25
●	25
■	40

⬭

Shape section	Number of spins
✚	25
▲	10
●	25
■	40

⬭

Shape section	Number of spins
✚	25
▲	25
●	25
■	25

⬭

18 A copier prints 1200 leaflets.
One-third of the leaflets are on yellow paper and the rest are on blue paper.
There are smudges on 5% of the blue leaflets.

Shade one bubble.

How many blue leaflets have smudges?

40	60	400	800
⬭	⬭	⬭	⬭

19 This chart shows the number of people that can sit at tables placed end to end in a line.

Number of tables in the line	2	3	4	5
Number of people	10	14	18	22

What is the minimum number of tables in the line needed to seat 28 people?

6	7	8	9
⬭	⬭	⬭	⬭

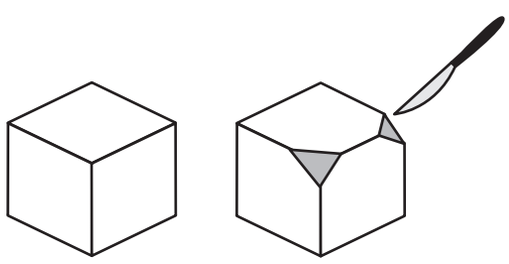
20 A 3D object has 6 faces. Only 2 faces are squares, the other 4 are rhombuses.

The object is a

cube.	prism.	pyramid.	hexagon.
⬭	⬭	⬭	⬭

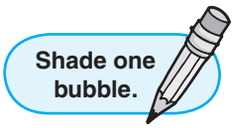
21 Sam cut 2 corners off a cube as shown.

Write your answer in the box.



How many **edges** does the object now have? ☐

22 This map shows the time difference between London and Brisbane on the same day.



When it is 5:30 pm on Tuesday in London, what time is it in Brisbane?

- ⬭ 7:30 am Wednesday
- ⬭ 7:30 am Tuesday
- ⬭ 3:30 am Tuesday
- ⬭ 3:30 am Wednesday

23 ■ and ▲ stand for numbers.
■ and ▲ are related by a rule.

■	▲
2	19
3	29
4	43
5	61

What is the rule?

- ⬭ ▲ = 10 × ■ – 1
- ⬭ ▲ = 14 × ■ – 13
- ⬭ ▲ = 2 × ■ × ■ + 11
- ⬭ ▲ = 4 × ■ × ■ + 3

24

ROAD DISTANCES IN EUROPE (km)					
	Athens	**Barcelona**	**Munich**	**Paris**	**Rome**
Athens		3250	2227	2940	2450
Barcelona	3250		1410	1110	1410
Munich	2227	1410		831	925
Paris	2940	1110	831		1400
Rome	2450	1410	925	1400	

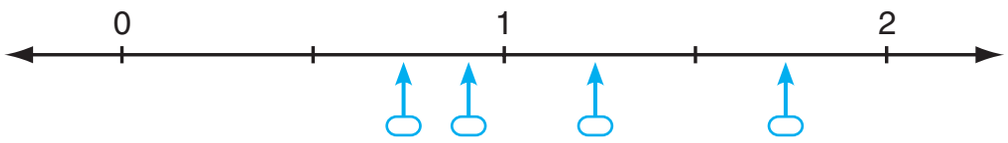
Shade one bubble.

The distance from Athens to Barcelona is about 4 times the distance from

- Munich to Paris.
- Munich to Rome.
- Athens to Paris.
- Athens to Rome.

25

Which arrow is pointing closest to the location of $\frac{3}{4}$ on this number line?



26

What fraction is halfway between $\frac{5}{7}$ and $\frac{6}{7}$?

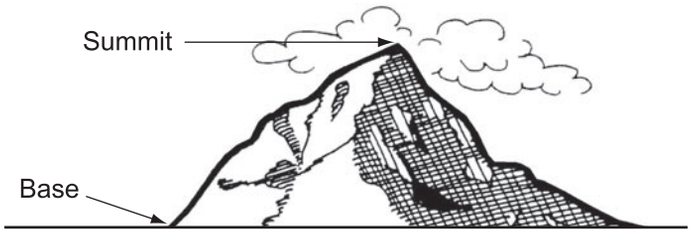
Write your answer in the boxes.

$\frac{\square}{\square}$

27

The temperature at the base of a mountain is 8 °C.
The temperature at the summit is 26 °C **colder** than at the base.

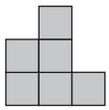
Write your answer in the box.



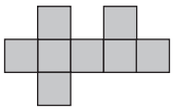
What is the temperature at the summit? ____ °C

28 Alison makes a 3D object out of cubes joined face-to-face.
She then draws a front view and a top view of her object.

Shade one bubble.

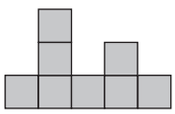


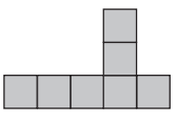
Front view

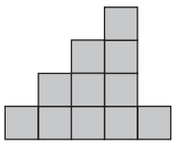


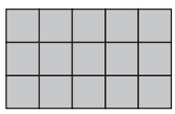
Top view

Which view below **cannot** be a side view?









29 The dimensions of a large room are **double** the dimensions of a small room.
Both rooms are rectangular prisms.
The volume of the small room is 10 cubic metres.

What is the volume of the large room?

- 20 cubic metres
- 40 cubic metres
- 80 cubic metres
- 160 cubic metres

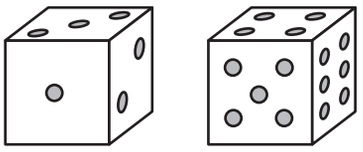
30 Which set of fractions is ordered from smallest to largest?

- $\frac{1}{2}, \frac{2}{3}, \frac{5}{8}, \frac{7}{12}, \frac{13}{24}$
- $\frac{1}{2}, \frac{13}{24}, \frac{7}{12}, \frac{5}{8}, \frac{2}{3}$
- $\frac{1}{2}, \frac{5}{8}, \frac{2}{3}, \frac{13}{24}, \frac{7}{12}$
- $\frac{2}{3}, \frac{5}{8}, \frac{7}{12}, \frac{1}{2}, \frac{13}{24}$

31 Greg rolled two dice 50 times.
Each time, he added the numbers on the top faces.
His results are shown.

Write your answer in the box.

Sum of numbers on top faces	Number of rolls
2	1
3	4
4	3
5	6
6	7
7	10
8	7
9	5
10	4
11	2
12	1
Total	**50**



What percentage of the rolls resulted in a sum of 7? ☐ %

32 This clock shows 5 o'clock.

What is the size of the **smaller** angle between the minute and hour hands? ☐ °

END OF TEST