YEAR

9

2014

NUMERACY
NON-CALCULATOR

1
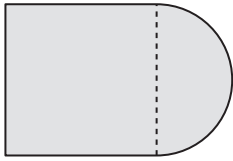
This 2D shape is made from
- ⬭ a cube and a sphere.
- ⬭ a triangle and a circle.
- ⬭ a square and an ellipse.
- ⬭ a square and a semicircle.

2

Together Luke and Emily saved $150.

Emily saved twice as much money as Luke.

How much money did Luke save?

$25	$50	$100	$300
⬭	⬭	⬭	⬭

3

The length of a movie is 125 minutes.

Lee starts watching the movie at 6:05 pm.

When will the movie finish?

7:20 pm	7:30 pm	8:10 pm	8:55 pm
⬭	⬭	⬭	⬭

4

How many centimetres are in 3.3 metres?

303	330	3030	3300
⬭	⬭	⬭	⬭

5

Which of these expressions is equal to m^4?

$m + m + m + m$	$m^2 + m^2$	$m \times 4$	$m \times m \times m \times m$
⬭	⬭	⬭	⬭

6 There were 22 people at a party.

The cost was $24 per person, plus $40 extra for the cake.

Which of these shows how to calculate the total cost of the party in dollars?

$(40 + 24) \times 22$ $(22 \times 24) + 40$ $22 + 24 + 40$ 22×24

○   ○   ○   ○

---

7 Simon has 720 mL of juice.

He pours equal amounts into each of 9 glasses with no juice left over.

How much juice is in each glass?
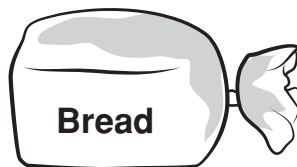
80 mL   90 mL   100 mL   120 mL

○   ○   ○   ○

---

8 Cathy buys 1 litre of milk and a loaf of bread.

Milk
1 litre

Bread

○ **$2.40**   ○ **$2.50**

She pays with a $20 note.

How much change should Cathy receive?

$15.10 $16.10 $16.90 $24.90

○   ○   ○   ○

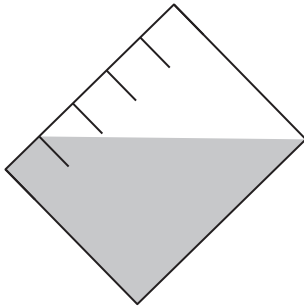**9** Which of these is 46.718 rounded to 2 decimal places?

46.70   46.71   46.72   46.81

○   ○   ○   ○

10

This cylinder can hold up to 50 mL of water.

How much water is in the cylinder?

10 mL	20 mL	30 mL	40 mL
○	○	○	○

11

The Year 7 classes at a school collected cans for recycling.

The table shows the mass each class collected.

	Class 7P	Class 7K	Class 7T	Class 7H
Week 1	5.29 kg	5.32 kg	5.3 kg	4.88 kg
Week 2	4.56 kg	4.01 kg	4.99 kg	5.25 kg

Which class collected the greatest total mass?

Class 7P	Class 7K	Class 7T	Class 7H
○	○	○	○

12 The shaded rectangle will be folded along the dotted line.
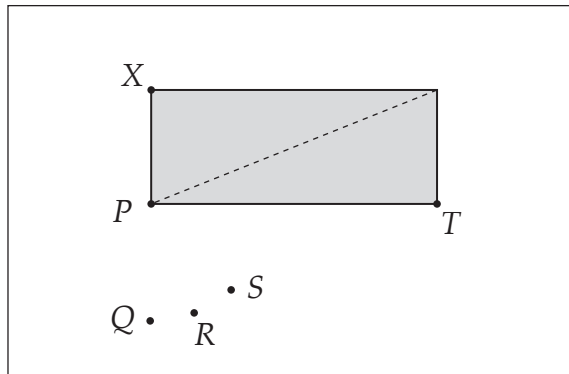
Where will point X move to?

P	Q	R	S	T
○	○	○	○	○

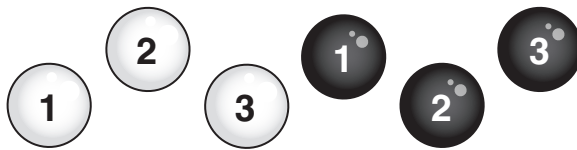**13** Jim picks one white ball and one black ball at random from these balls.

He adds the numbers on the two balls he picked to get a total.

Which total is Jim most likely to get?

3	4	5	6
○	○	○	○

14 Jane has $5 more than Ben.

Jane correctly writes this fact as an equation using j for her money and b for Ben's.

Which of these could be Jane's equation?

$j = 5 \div b$	$j = 5 - b$	$j = b - 5$	$j = b + 5$
○	○	○	○

15 2004 was the first leap year in the 21st century.

When is the 10th leap year in the 21st century?

| 2010 | 2014 | 2040 | 2044 |

16 A large block of land is divided into 12 equal-sized blocks as shown.

	Sold		Sold	Sold	Sold
Sold	Sold	Sold	Sold		Sold

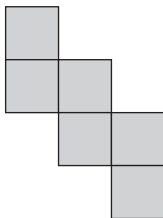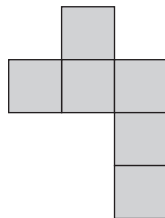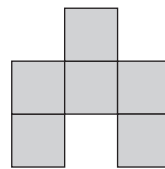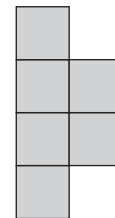What percentage of the large block has been sold?

| 67% | 75% | 80% | 90% |

17 Which of these can fold to make a cube?

18 Kim drew a point ●

She then drew a diagram to correctly show all the points on her page that were exactly 1 cm away from this point.

Which of these was her diagram?
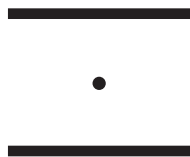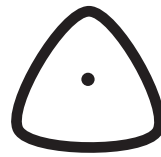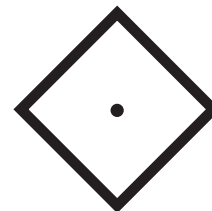
19

This shape is made with three regular hexagons and three rhombuses.
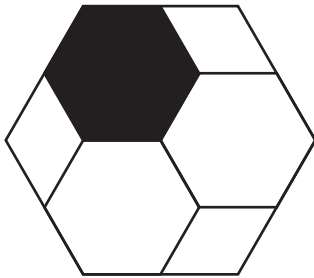
What fraction of the shape is black?

$\frac{1}{3}$ ⬭ $\frac{1}{4}$ ⬭ $\frac{1}{5}$ ⬭ $\frac{1}{6}$ ⬭

20
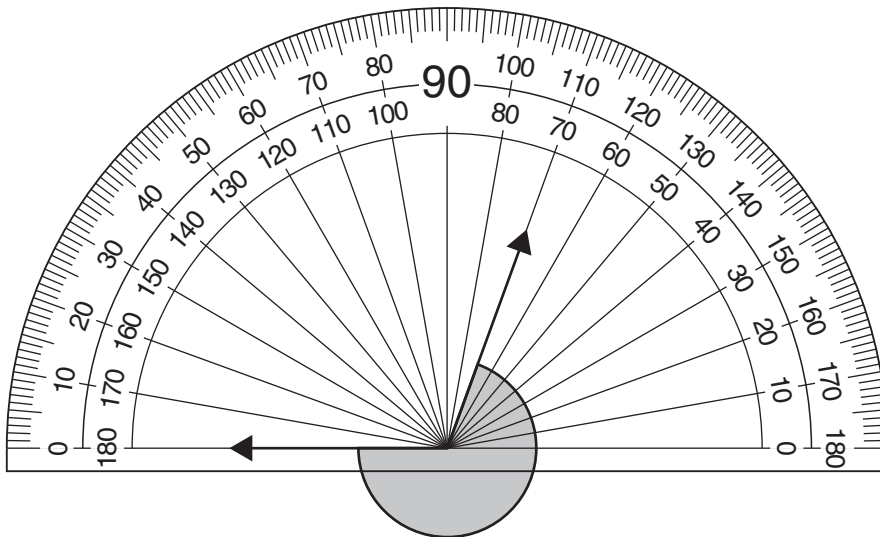
What is the size of the shaded angle?

70° ⬭   110° ⬭   250° ⬭   290° ⬭

21

This map is to scale. It shows four routes from John's house to his school.

The scale of the map is not shown.

John's house

Route 1
Route 2
Route 3
Route 4
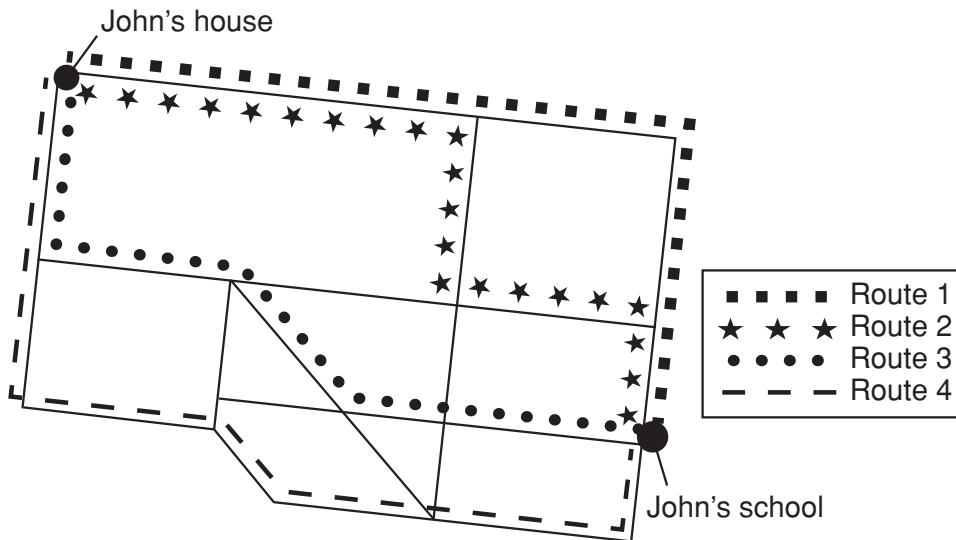
John's school

Which route is the shortest distance from John's house to his school?

Route 1   Route 2   Route 3   Route 4

⬭   ⬭   ⬭   ⬭

22

Sally has 10 hens.

In total they drink about 3 litres of water each day.

Approximately how much water would each hen drink in one week?

0.3 litres   2.1 litres   3 litres   21 litres

⬭   ⬭   ⬭   ⬭

23 This prism is half of a cube.

A, B and C are three of its vertices.

What type of triangle is $\triangle ABC$?

isosceles	equilateral	right-angled	scalene
⬭	⬭	⬭	⬭

24 Nikki solved the equation $3x - 1 = 4$ correctly.

Which of the following could be two lines of her solution?

$3x = 3$	$3x = 3$	$3x = 5$	$3x = 5$
$x = 0$	$x = 1$	$x = \dfrac{3}{5}$	$x = \dfrac{5}{3}$
⬭	⬭	⬭	⬭

25 This table shows the relationship between metric hat sizes and American hat sizes.

Metric	53	54	55	56	57	58	59	60
American	$6\dfrac{5}{8}$	$6\dfrac{3}{4}$	$6\dfrac{7}{8}$	7	$7\dfrac{1}{8}$	$7\dfrac{1}{4}$	$7\dfrac{3}{8}$	$7\dfrac{1}{2}$

What would the metric hat size be for an American hat size of 8?

26 This table shows the number of people at a party.

	Male	Female
Adult	20	10
Child	40	30

What fraction of the females at the party are adults?

$\frac{10}{20}$ $\frac{10}{30}$ $\frac{10}{40}$ $\frac{10}{100}$ $\frac{40}{100}$

◯ ◯ ◯ ◯ ◯

27 Which of these is closest to the value of the missing number in this equation?

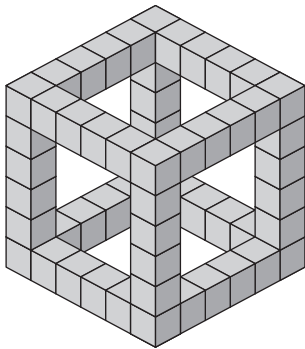(? + 59.65) ÷ 3.14 = 78.5

60 85 140 180 300

◯ ◯ ◯ ◯ ◯

28 Mike joined some blocks together to make the edges of a 6 × 6 × 6 cube.

In total he used 56 blocks.

How many blocks would he need to make the edges of a 7 × 7 × 7 cube in the same way?

29 The fraction $\frac{1}{8}$ equals 0.125 as a decimal.

What does $\frac{1}{16}$ equal as a decimal?

30 Half of Caleb's money is equal to one-third of Ellie's money.

Together they have $35.

How much money does Ellie have?

$

31 Lisa measured the temperature of a substance every 5 minutes.

- The first measurement was –0.8 °C.
- The second measurement was 1.8 °C.
- For the third measurement, the temperature had increased by double the previous increase.

What was the third measurement?

°C

32 Connor travelled from home to a country town.

The 130-kilometre drive took 1 hour 30 minutes.

He returned home by the same route.

The return drive took 1 hour 45 minutes.

What was Connor's average speed for the whole journey?

kilometres per hour

STOP – END OF TEST