YEAR
7
2013

NUMERACY
CALCULATOR ALLOWED

SESSION 1

0:40
Time available for students to
complete test: 40 minutes

Use 2B or HB
pencil **only**

1

State	Population in June 2011
New South Wales	7 303 700
Victoria	5 624 100

How many more people lived in New South Wales than in Victoria in June 2011?

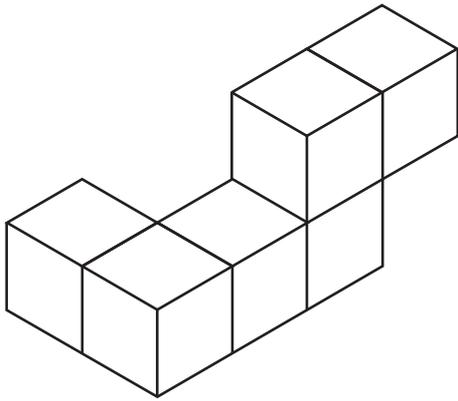◯ 1 679 600

◯ 1 789 600

◯ 2 321 600

◯ 2 679 600

2

A dotted line is drawn through each of the four letters shown below.

Which dotted line is a line of symmetry?

S

◯

S

◯

V

◯

V

◯

3 There are 6 cubes in this 3D puzzle.

The puzzle is completely dipped into red paint.

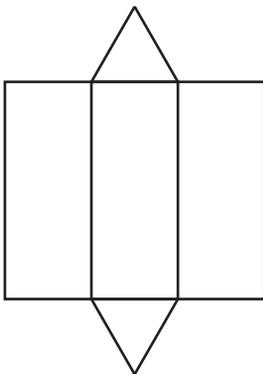When the cubes are separated, how many faces will be red?

36	31	30	26	10
⬭	⬭	⬭	⬭	⬭

4

This diagram is the net of a

⬭ rectangular pyramid.

⬭ triangular pyramid.

⬭ triangular prism.

⬭ triangle.

5 An automatic swimming pool filter turns on for 7 hours every day.

For what fraction of the day is the filter **off**?

$\frac{7}{17}$ $\frac{17}{7}$ $\frac{17}{24}$ $\frac{24}{17}$

○ ○ ○ ○

6 Two sides of a triangle measure 8 cm and 11 cm.

Which one of these statements about the length of the third side is true?

○ Its length is 3 cm.

○ Its length is less than 3 cm.

○ Its length is greater than 19 cm.

○ Its length is greater than 3 cm but less than 19 cm.

7 In this table, each pair of numbers follows the rule

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

□	△
1	7
5	15
20	45
100	?

What is the missing number in the table?

75 205 210 225

○ ○ ○ ○

8 The shaded area on this graph shows how much of a computer file has loaded.

What percentage of the file has loaded?

55%	60%	65%	70%
⬭	⬭	⬭	⬭

9 What is the value of 16^2 ?

4	18	32	216	256
⬭	⬭	⬭	⬭	⬭

10 The number 0.15 is

⬭ between 0.01 and 0.1

⬭ between 0.1 and 1

⬭ between 1 and 2

⬭ between 10 and 20

11 The siren sounded to end a football match.
The umpire was 200 metres from the siren.

If the sound travelled at 343 metres per second, how many seconds did the sound take to get to the umpire?
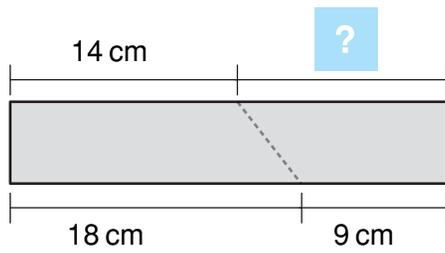
0.583	1.715	2.383	19.056
⬭	⬭	⬭	⬭

12

A rectangle has been cut into two pieces as shown in the diagram.

14 cm

?

18 cm   9 cm

What is the missing length?
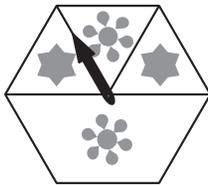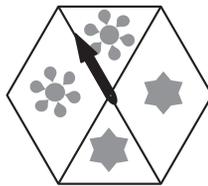
5 cm   7 cm   11 cm   13 cm

13

Which spinner does not show a 50-50 chance of landing on the symbol?
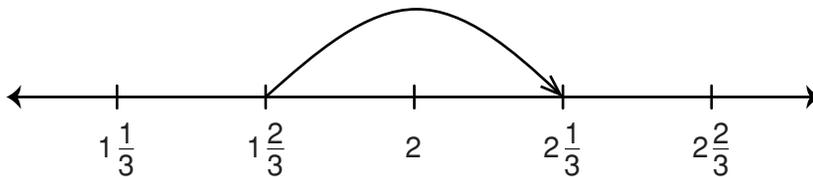
14

$$1\frac{1}{3} \quad 1\frac{2}{3} \quad 2 \quad 2\frac{1}{3} \quad 2\frac{2}{3}$$
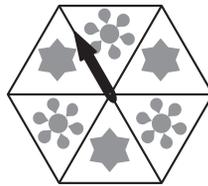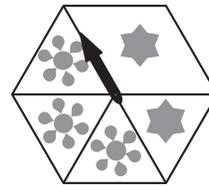
What number is added to $1\frac{2}{3}$ to equal $2\frac{1}{3}$?

2 $1\frac{1}{3}$ $\frac{2}{3}$ $\frac{1}{3}$

15

80°

110°   110°

?   diagram not drawn to scale
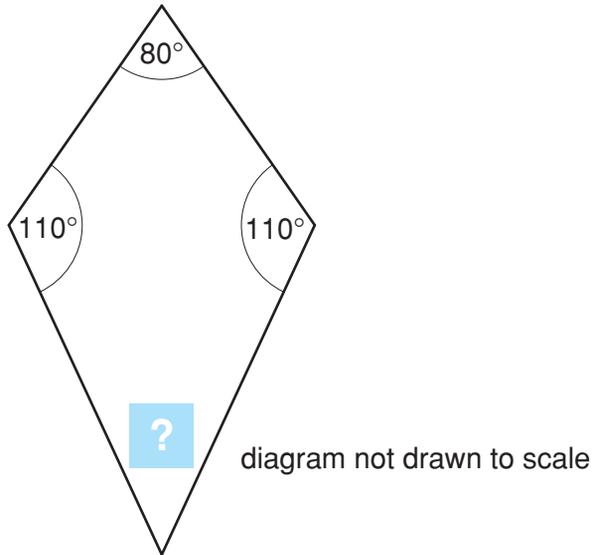
What is the size of the missing angle?

50°   60°   70°   80°   100°

○   ○   ○   ○   ○

16

This pie chart shows how Dan spent $600 on sporting equipment over a 3-year period.

In 2011 Dan spent 20% of his money.

2012

$270

2010

20%

2011
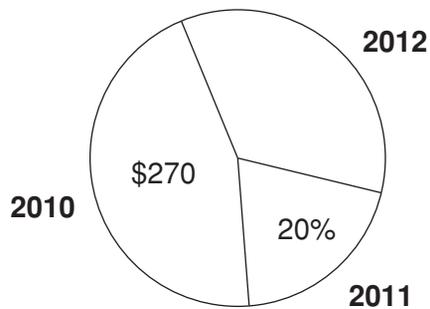
How much money did he spend on sporting equipment in 2012?

$210 $270 $310 $330

○   ○   ○   ○

17 There are 61 guests at a party.

There are 17 more men than women.

How many women are at the party?

21	22	39	44
◯	◯	◯	◯

18 Ethan used this rule to make a number pattern.

Start with 3.
To get the next number add 3 and then double.

The first four numbers in his pattern were 3, 12, 30, 66.

What was the **sixth** number in his pattern?

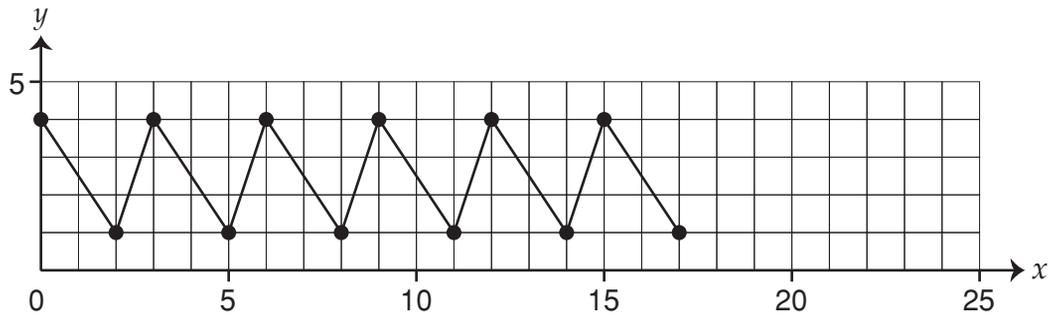| 138	144	273	282
◯	◯	◯	◯

19 Mia is drawing a repeating pattern on this grid.

Which of these points will be part of Mia's pattern?

(18, 1)	(19, 4)	(21, 4)	(22, 1)
◯	◯	◯	◯

20 Tim earned $300 in 5 days.

After the first day, he earned $10 more each day than the day before.
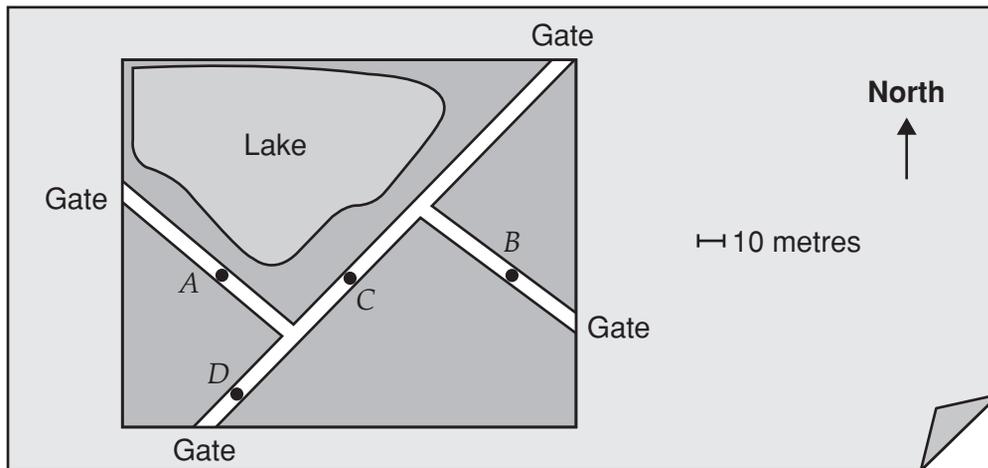
How much did Tim earn on the first day?

$30	$40	$50	$60
◯	◯	◯	◯

21 This is a map of a park.

Josh entered the park through one of the gates.
He then walked south-east along a path.
After 90 metres he turned right.
He then walked another 30 metres and stopped.

Which point on the map shows where Josh stopped?

A	B	C	D
◯	◯	◯	◯

22 Which number will complete this number sentence correctly?

$2.5 = \boxed{?} \times 1.5$

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

23

This table shows how the mass of barley is related to its volume.

Volume (cubic metres)	Mass (tonnes)
50	30
100	60
150	90
200	120

A silo contains 105 cubic metres of barley.

How many tonnes of barley are in the silo?

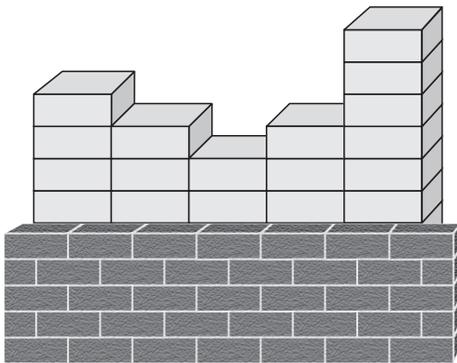63 tonnes   65 tonnes   165 tonnes   175 tonnes

◯   ◯   ◯   ◯

24

Five stacks of boxes were placed on level ground behind a brick wall.

There is a total of 33 boxes.

How many boxes are in the tallest stack?

25

The mass of a 20-cent coin is about 11.3 grams.
The mass of a 10-cent coin is about 5.65 grams.

Harry has 169.5 grams of 20-cent coins.
Jade has 141.25 grams of 10-cent coins.

How much more are Harry's coins worth than Jade's coins?

	cents

26

The disk in the hard drive of Stella's computer makes 90 full turns every second.

How many **minutes** will it take for the disk to make 135 000 full turns?

	minutes

27

This table shows attendance at a concert over four nights.

Night	Number of people
Wednesday	310
Thursday	390
Friday	380
Saturday	420

The cost of each ticket was $20.

What was the mean amount of money collected from ticket sales per night?

$ [   ]

28

Alex spent 85% of his money on a surfboard.
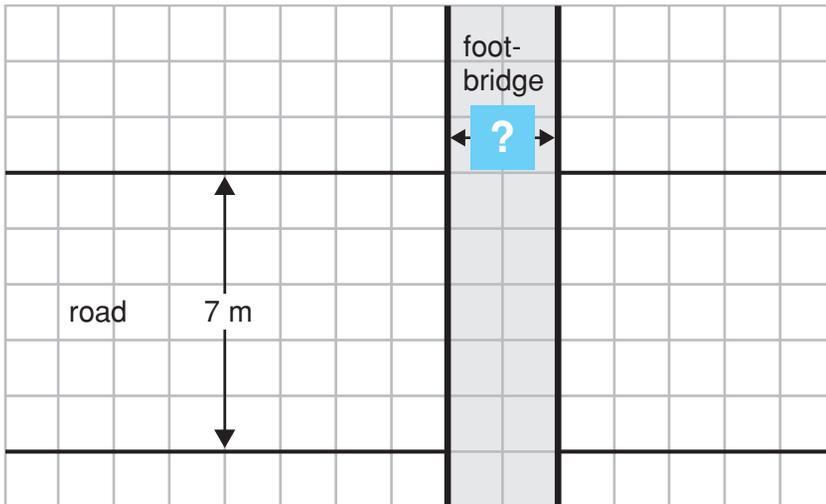
The surfboard cost $340.

How much money did Alex have left after he bought the surfboard?

$ [   ]

29

This scale diagram shows a footbridge crossing over a road.

The width of the road is 7 metres.

What is the width of the footbridge?

| | metres

30

Liz can buy washing powder in four different sizes.

Size	1 kg	2 kg	4 kg	5 kg
Price	$6.90	$13.70	$26.40	$34.00

What is the lowest price Liz can pay for 10 kg of washing powder?

$ | |

31

Nina used 2 litres of paint to paint a wall.

The wall was a rectangle 2 metres high and 4 metres wide.

How many litres of paint would she need to paint a rectangular wall which is 2.5 metres high and 8 metres wide?

| | litres

32 A square has an area of 121 square centimetres.

What is its perimeter?

| | centimetres

STOP – END OF TEST

Do not turn this page.