Year 7 NUMERACY Calculator

Test 2

INSTRUCTIONS TO STUDENTS

Use a 2B pencil to show your answers.

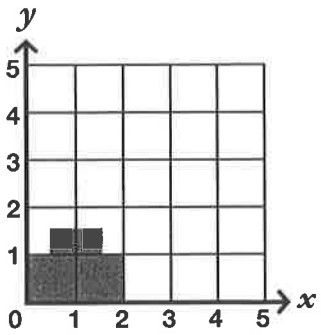
For the multiple-choice questions, show your answer by shading the matching bubble. If you make a mistake, erase the shading and shade the correct bubble.

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

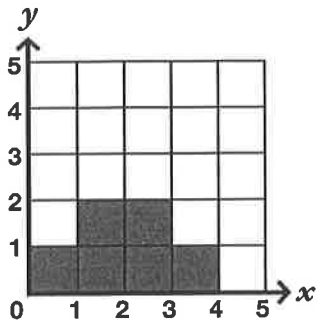
1 Milly drew a shaded shape on a grid (shown right).

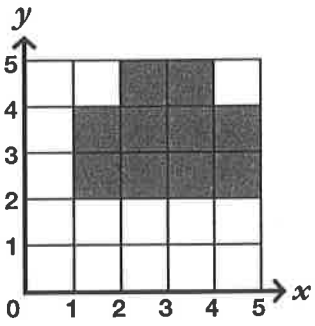
On another grid she drew a similar shape twice as long and twice as wide.

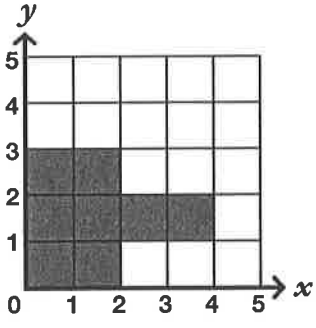
Which of the diagrams below shows this new shape?

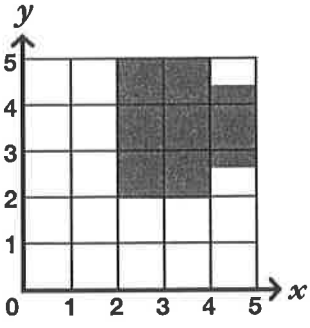


Shade one bubble.









2 If ◆ = 9,

□ = 5

and ◆ − □ = ● + ●,

which number does ● equal?

2 3 4 5

3 The First World War ended in 1918.

In what year did people remember that it was 50 years since the war ended?

1950 1958 1968 2008

4 Jonas ran a distance of 200 metres in 20 seconds.
What was his average speed in metres per second?

1	10	400	4000
○	○	○	○

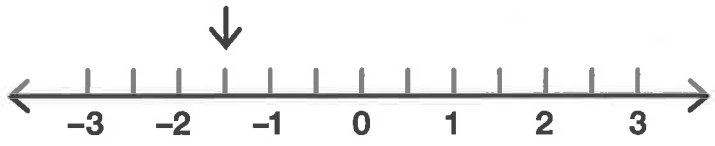
5 On a map, 1 cm represents 5 km.
Axton and Bobton are 6.5 cm apart on the map.
What is the actual distance between Axton and Bobton?

1.3 km	32.5 km	11.5 km	32.5 cm
○	○	○	○

6 There are 52 830 people in Badwell.
What is this number rounded to the nearest thousand?

50 000	52 000	52 800	53 000
○	○	○	○

7 The arrow points to a position on the number line.
What number is at this position?

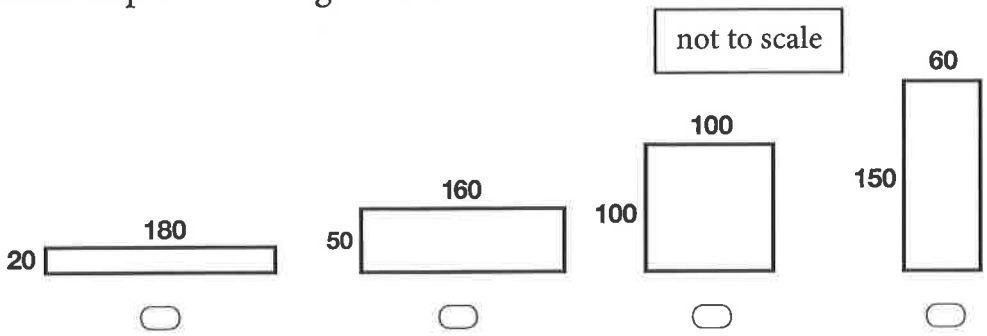


8 Milena thinks of a number.
She then divides it by 5 and adds 2.
The answer is 12.
What number did Milena start with?

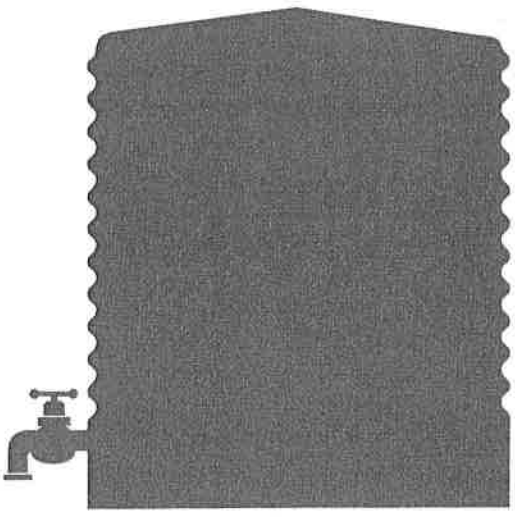
Write your answer in the box.

9 Which shape has the largest area?

Shade one bubble.



10 A tank has a capacity of 7.35 kilolitres.



How many litres will the tank hold when full?

735 L ○ 7035 L ○ 7350 L ○ 73 500 L ○

11 Four teams are running in a cross-country race.

Shade one bubble.

Team	Number of people in team	Total time for team (min)
Red	5	100
Orange	8	176
Blue	10	210
Yellow	12	246

The winning team must average the shortest time per person for the race.

Which team won?

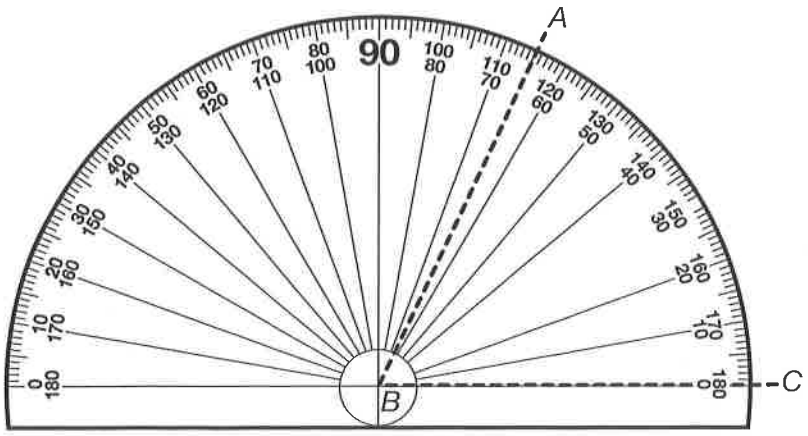
Red ○ Orange ○ Blue ○ Yellow ○

12 What number will make this number sentence true?

Write your answer in the box.

$2.75 \times 6 =$ ☐ $\times 3$

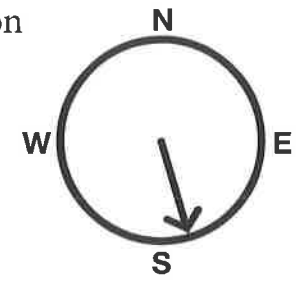
13



What is the size of angle *ABC*?

☐ °

14 Which one of the following could be the direction shown on the compass?



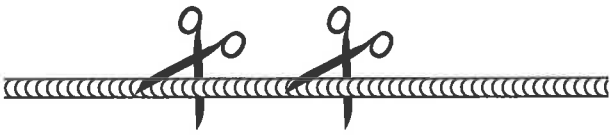
Shade one bubble.

S 20°E ○ N 70°E ○ E 20°S ○ S 70°E ○

15 A piece of rope is 7.5 metres long.

Joe cuts it into 0.15 metre lengths.

There is no rope left over.



How should Joe calculate how many 0.15 metre pieces of rope he will have?

7.5×0.15 ○ $7.5 \div 0.15$ ○ $0.15 \div 7.5$ ○ $7.5 - 0.15$ ○

16 $56 \times \blacklozenge = 16$

What is the value of $\blacklozenge$?

$\frac{2}{7}$ ○ $\frac{5}{7}$ ○ $\frac{7}{5}$ ○ $\frac{7}{2}$ ○

17 Rhiannon is flying to London.

She has been told that her luggage can weigh no more than 22 kg.

She has a suitcase and two small bags, which weigh a total of exactly 22 kg.

Her suitcase weighs 15.3 kg.

Her small bags weigh exactly the same amount as each other.

How many kilograms does **each** small bag weigh?

0.7 kg ○ 3.35 kg ○ 6.65 kg ○ 18.65 kg ○

18 An electric drill was advertised at $169.

Shade one bubble.

The store gave Dale a 10% discount on the advertised price.

How much did she pay for the drill?

$168.90	$168	$159	$152.10
○	○	○	○

19 There were 28 cars in a carpark.

Brand	Holden	Toyota	Ford	Hyundai
Number	10	6	10	2

Use the table to find what fraction of the cars were Toyotas.

$\frac{3}{14}$	$\frac{1}{4}$	$\frac{5}{14}$	$\frac{1}{28}$
○	○	○	○

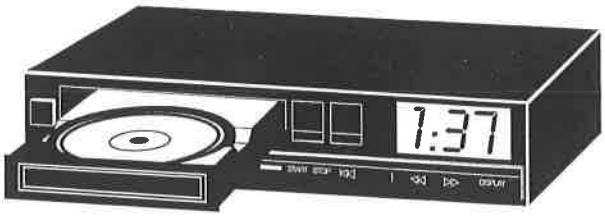
20 A cake was put in the oven at 14:53 on the oven clock.

It was cooked for 45 minutes.

When was the cake taken out of the oven?

14:08	15:08	15:38	15:53
○	○	○	○

21 The DVD player shows the time of day as 1:37.



Write your answer in the box.

The film has 48 minutes to run.

What time will the DVD player show at the end of the film?

22 The temperature at 3 pm was calculated using $(24.2 + 2.8 \times 6)$°C.

What was the temperature at 3 pm?

°C

23 $1 coins are placed in a straight line with no space between them.

The diameter of a $1 coin is 25 mm.

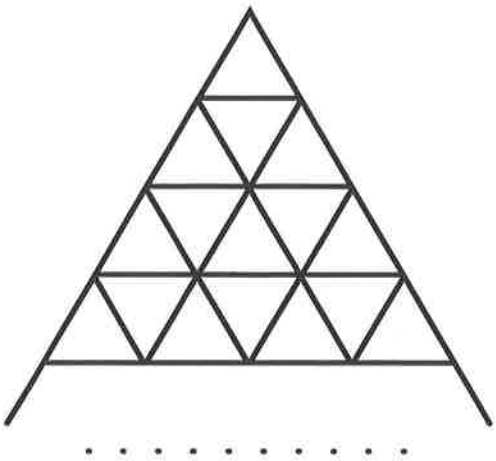
How much would 1 km of $1 coins be worth?

Shade one bubble.

$500	$2500	$40 000	$400 000
○	○	○	○

24 16 triangles are arranged as shown.
Another two rows are added to complete the pattern.
How many extra triangles are needed for the last row?

Shade one bubble.



9	11	16	25
○	○	○	○

25 Five friends want to raise $400 for their favourite charity.
The mean (average) amount that each of the friends needs to raise is:

$20	$40	$60	$80
○	○	○	○

26 Mick used 90 identical cubes to build a rectangular prism.
He used 18 cubes for the base.
Which of these could be the dimensions of Mick's prism?

$3 \times 2 \times 15$	$6 \times 3 \times 4$	$6 \times 3 \times 5$	$10 \times 1 \times 9$
○	○	○	○

27 There are three numbers: a, b and c.

$c = (a + b)(a - b)$

What is the value of c when $a = 167$ and $b = 133$?

Write your answer in the box.

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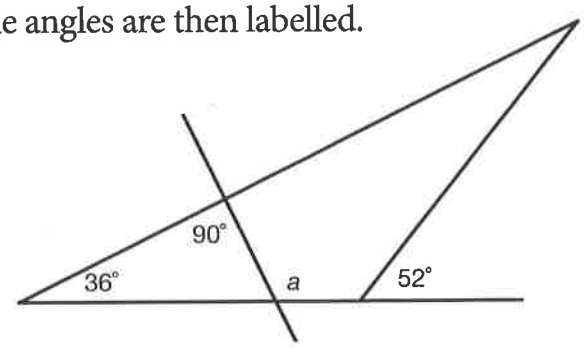
28 A triangle is divided into two parts by a straight line as shown.

The angles are then labelled.



not to scale

Shade one bubble.

Which statement is true about the size of angle a?

$a = 36°$	$a = 52°$	$a = 126°$	$a = 128°$
○	○	○	○

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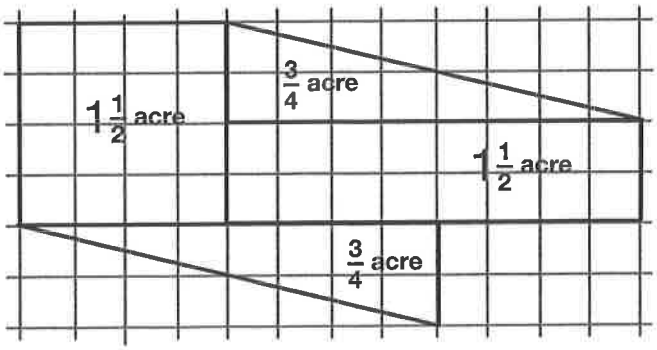
29 The plan shows 4 blocks of land.

Their areas are measured **in acres**.



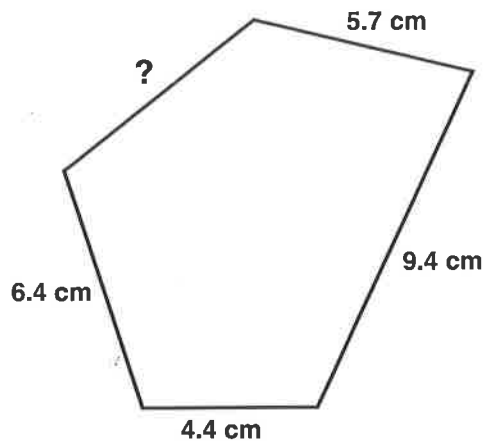
1 hectare = 2.47 acres.

The total area of the 4 blocks **in hectares** is closest to:

1.82 h	4.5 h	6.97 h	11.12 h
○	○	○	○

30 Four of the sides of a pentagon measure 4.4 cm, 6.4 cm, 5.7 cm and 9.4 cm.

Write your answer in the box.



not to scale

The perimeter of the pentagon is 32 cm.

What is the length of the fifth side of the pentagon?

[ ] cm

31 Lou shared his 12 sweets with Maria.

He gave Maria twice as many sweets as he kept for himself.

How many sweets did he give to Maria?

[ ]

32 I am a quadrilateral with both pairs of opposite sides parallel and equal.

My diagonals are **not** of equal length. What am I?

Shade one bubble.

square ○ rectangle ○ parallelogram ○ trapezium ○