Year 7 NUMERACY Calculator

Test 4

INSTRUCTIONS TO STUDENTS

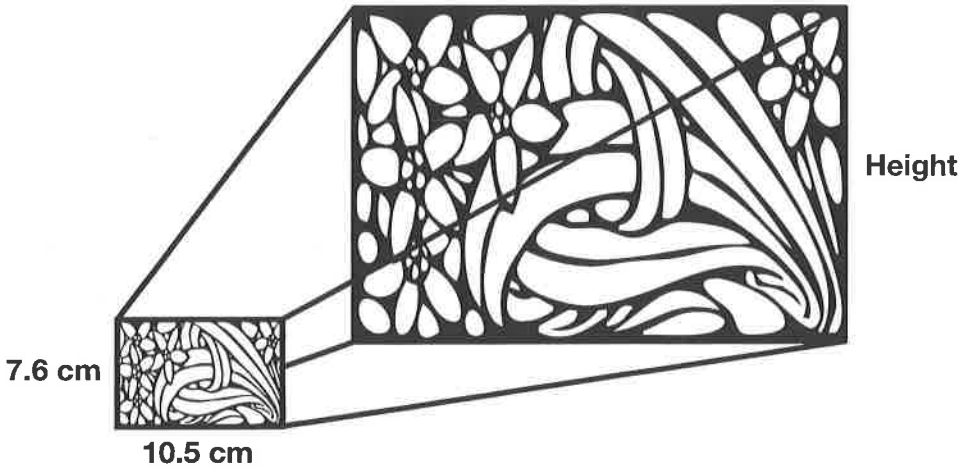
Use a 2B pencil to show your answers.

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 The enlarged picture is three times wider and higher than the original.

Shade one bubble.



How high is the picture?

2.53 cm	3.5 cm	22.8 cm	31.5 cm
○	○	○	○

2 The instructions in the flowchart are followed to give an answer (A) at the end.

What is A?

4	26	27	28
○	○	○	○

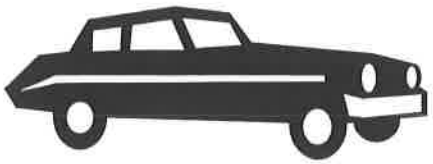
3 The first Ice Age began 2.3 billion years ago.

It ended 0.6 billion years ago.

How long was the first Ice Age?

2.9 billion years	2.3 billion years	1.7 billion years	1.38 billion years
○	○	○	○

4 Ellie drives at an average of 50 km per hour.



Shade one bubble.

How many hours does she take to travel 200 km?

2	4	5	10
○	○	○	○

5 Suzie converts $350 Australian into $US.

How many US dollars and cents will she have?

$1 Australian = $0.67 US

$149.25	$234.50	$349.33	$522.39
○	○	○	○

6 Which of the following numbers is the largest?

0.3120	0.3102	0.0312	0.3012
○	○	○	○

7

Write your answer in the box.

Which even number is greater than –6 and less than –2?

8 Harry thinks of a number.

He adds 5 then divides by 4.

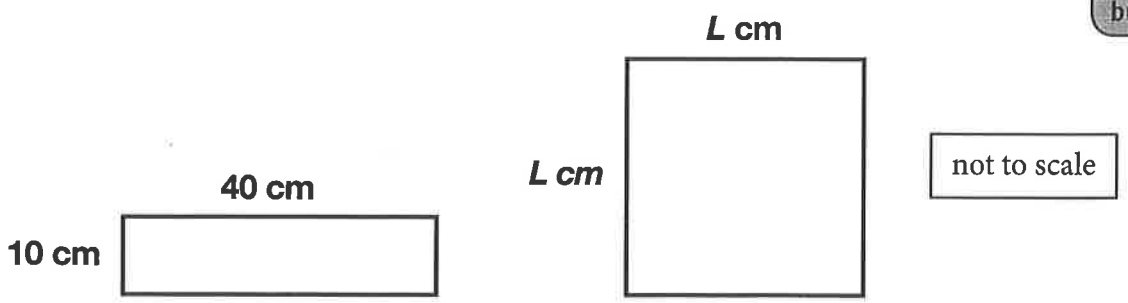
The answer is 3.

What number did Harry think of?

Write your answer in the box.

9 The rectangle and the square have the same area.

Shade one bubble.



What is the value of L?

10	20	40	100
○	○	○	○

10 A race was 22 000 cm long.

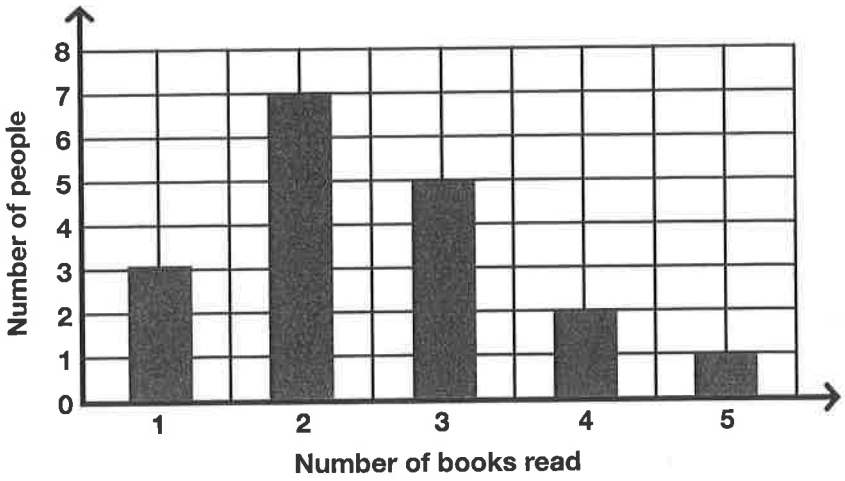
What is the distance expressed in metres?

22 m	220 m	2200 m	2 200 000 m
○	○	○	○

11 Eighteen people were asked how many books they read last week.

The graph shows the number of people who said they had read 1, 2, 3, 4 and 5 books.

Shade one bubble.



The average number of books read is:

1.5	2.5	3.5	4.5
○	○	○	○

12 What number will make this number sentence true?

Write your answer in the box.

$7.82 - 4.9 =$ ☐ $- 3.9$

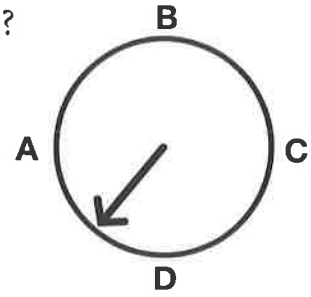
13 The diagram shows an airspeed indicator from an aeroplane.

What is the airspeed of the aeroplane?

☐ knots

14 The compass arrow is pointing in a south-east direction.

Which of the following is in the direction of north?



Shade one bubble.

A ○ B ○ C ○ D ○

15 Pierre the painter can finish a wall of area 12.6 m² in 30 minutes.

Which calculation can be used to find the area of wall he can paint in 45 minutes?

(12.6×0.75) m² ○ (12.6×1.5) m² ○ $(12.6 \div 30)$ m² ○ $(12.6 \div 45)$ m² ○

16 $5 - \blacklozenge = 6 \times 3 \div 9$.

What is the value of $\blacklozenge$?

2 ○ 3 ○ 7 ○ 8 ○

17 A car was filled up with 15.5 L of petrol.

The price of the petrol was \$1.10 per litre.

How much did the petrol cost?

\$14.09 ○ \$14.40 ○ \$16.60 ○ \$17.05 ○

18 Sean's team scored a total of 25 points.

Sean scored 12 of the points himself.

What percentage of the team's points were scored by Sean?

25%	30%	48%	50%
○	○	○	○

19 The table shows the number of students in Years 6, 7 and 8 who belong to the Bluewave Swimming Club.

Year 6	Year 7	Year 8
10	14	16

What fraction of the students are **not** in Year 8?

$\frac{1}{4}$	$\frac{7}{20}$	$\frac{2}{5}$	$\frac{3}{5}$
○	○	○	○

20 A 24-hour watch reads 20:54 hours.

What time will it be 3 hours and 7 minutes later?

- ○ 1 o'clock in the morning
- ○ 1 minute after midday
- ○ 1 o'clock in the afternoon
- ○ 1 minute after midnight

21 Nguyen just missed the train when it arrived at 10 minutes to 4.
He will have to wait 17 minutes for the next train.
What time is the next train?

Shade one bubble.

4:27	5:07	7 minutes past 4	17 minutes past 4
○	○	○	○

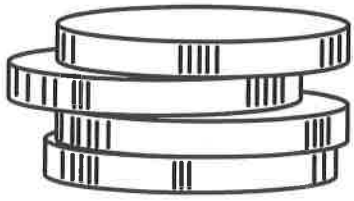
22 Tiger Forest swings his club 40 km per hour faster than Fish Forman.
Fish swings his club at a speed of 161.168 km per hour.
At what speed does Tiger swing his club?

Write your answer in the box.

[ ] km per hour

23 $1 coins are piled one on top of another.
The thickness of a $1 coin is 3 mm.

Shade one bubble.



How much would a 12 m high pile of $1 coins be worth?

$4 000 000	$400 000	$40 000	$4000
○	○	○	○

24 The table shows the number of sides and number of diagonals for each of the listed polygons.

Polygon	Number of sides	Number of diagonals
triangle	3	0
quadrilateral	4	2
pentagon	5	5
hexagon	6	9
heptagon	7	14
octagon	8	?
nonagon	9	27
decagon	10	35

How many diagonals are there in an octagon?

16 ○ 18 ○ 20 ○ 24 ○

25 Peter needed a total of 200 points in 4 attempts to be able to go on to the next level in a game.

He averaged 40 points on each of his first three games.

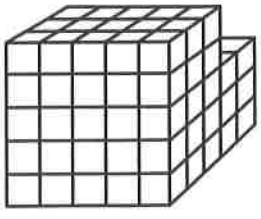
The number of points he needed in the fourth game was:

80 ○ 60 ○ 50 ○ 40 ○

26 Dek will use 125 identical cubes to make one large cube.

There are 20 cubes missing as shown.

Which could be the dimensions of the missing shape?

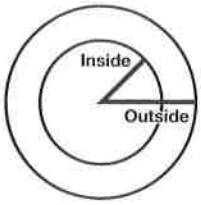


$5 \times 4 \times 1$ ○ $5 \times 2 \times 2$ ○ $6 \times 3 \times 2$ ○ $10 \times 1 \times 2$ ○

27 A rule to calculate the approximate area of a circular 'donut' is:

Area = 3 × [(outside radius)² – (inside radius)²]

Use this rule to complete the table.

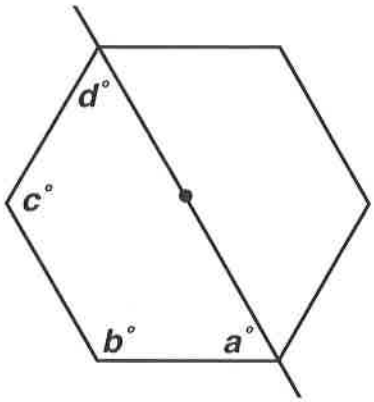


Write your answer in the box.

Outside radius (m)	Inside radius (m)	Area of donut (m²)
5	3	

28 A hexagon is divided into two parts by a straight line through its centre as shown.

The angles are then labelled.



Shade one bubble.

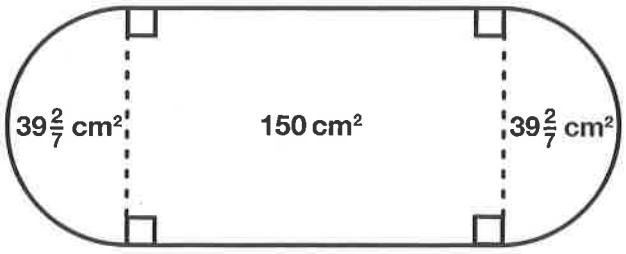
Which statement is true about the sum of angles?

$b + c = 120$ ○ $a + d = 180$ ○ $a + b + c + d = 360$ ○ $b + c = a + d$ ○

29 The shape below is made up of a rectangle and two semicircles.

The area of each semicircle is $39\frac{2}{7}$ cm².

The area of the rectangle is 150 cm².



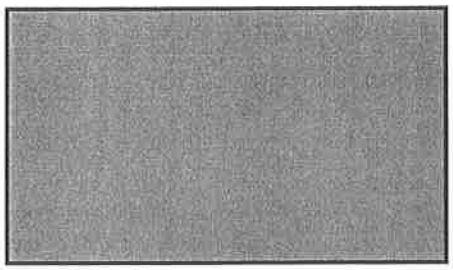
not to scale

The total area of the shape is closest to:

189 cm² ○ 229 cm² ○ 378 cm² ○ 464 cm² ○

30 A wall of Shari's loungeroom has an area of 12.6 m^2 and is to be painted.

The width of the wall is 4200 mm.



not to scale

4200 mm

How high is the wall in metres?

Write your answer in the box.

[ ] m

31 Magda mixed white and yellow paint to get the colour she wanted.

She needed twice as much yellow as white.

She used 5 litres of yellow paint.

How many litres of white paint did she use?

[ ] L

32 For a right-angled isosceles triangle *ABC*, which of the following is **not** true?

Shade one bubble.

- ○ *ABC* has two equal angles.
- ○ *ABC* has two equal sides.
- ○ *ABC* has no obtuse angles.
- ○ *ABC* has only one acute angle.