MINISTERIAL COUNCIL ON EDUCATION, EMPLOYMENT, TRAINING AND YOUTH AFFAIRS

NATIONAL ASSESSMENT PROGRAM
LITERACY AND NUMERACY

NUMERACY NON-CALCULATOR

YEAR 7 2009

STUDENT TO COMPLETE

Please print your first name and last name below. Write in capital letters.

FIRST NAME _____ LAST NAME _____

TEACHER TO COMPLETE

Please indicate if any of the following apply for this test session. The student was

○ absent ○ exempt ○ withdrawn ○ sanctioned abandonment

Books for students in these categories MUST NOT be returned for processing.

7404444

SESSION 2 Time available for students to complete test: 40 minutes

Use 2B pencil only

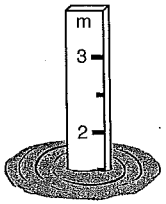
3.25, 3.0, 2.75, 2.5, 2.25, ...

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

This pole measures the depth of water in a river.



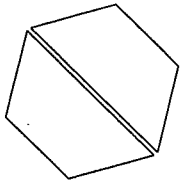
Approximately how deep is the river?

15 centimetres	1.05 metres	1.5 metres	15 metres
○	○	○	○

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

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

A regular hexagon is cut in half like this.



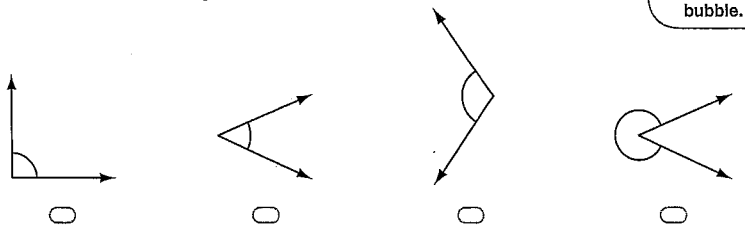
The shape of each half is a

rectangle.	pentagon.	hexagon.	trapezium.
○	○	○	○

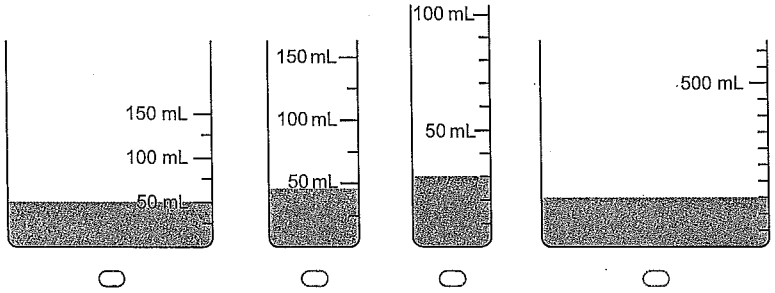
7-3-02

5 Which shows a **reflex** angle?

Shade one bubble.

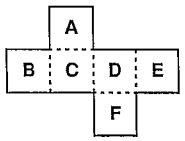


6 Which container has the **least** liquid?



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.

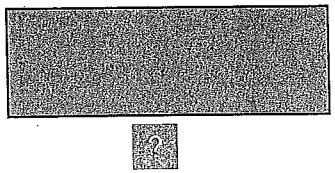
What is the number? ☐

7-3-03

7404444

The area of this shaded rectangle is 98 cm².

Write your answer in the box.



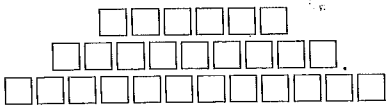
(not to scale)

What is the length of the shaded rectangle?

☐ cm

The seating plan for a hall makes this pattern.

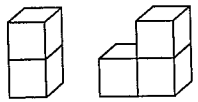
Shade one bubble.



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

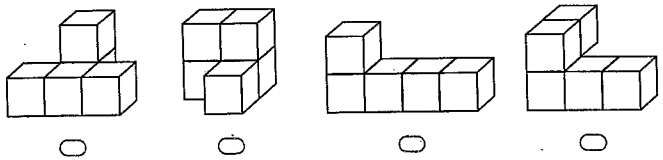
6 15 18 21

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?



7-3-04

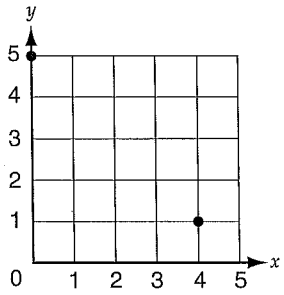
12 A tin contains 15 green, 10 red, 7 black and 18 white jelly beans.
Without looking, Jen takes one jelly bean from the tin.

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

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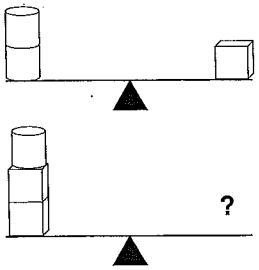
The first balance shows that 2 cans have the same mass as 1 block.

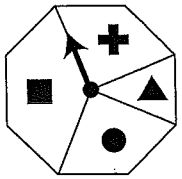
Shade one bubble.



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

3 ○ 4 ○ 5 ○ 6 ○

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
○	○	○	○

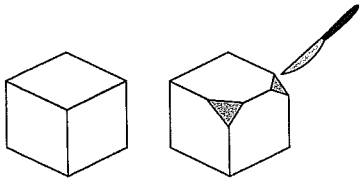
20 A 3D object has 6 faces. Only 2 faces are squares, the other 4 are rhombuses.

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? ☐

7-3-07

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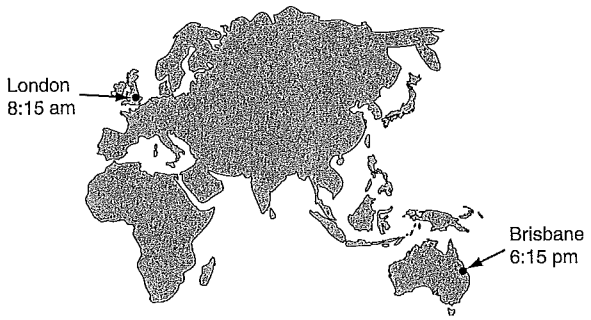
This map shows the time difference between London and Brisbane on the same day.

Shade one bubble.



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

■ 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

7-3-08

24

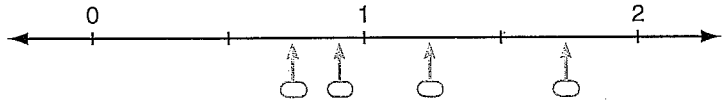
Shade one bubble.

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	

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?



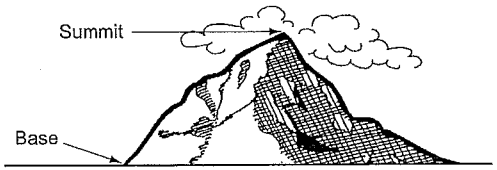
26 What fraction is halfway between $\frac{5}{7}$ and $\frac{6}{7}$?

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

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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?

○ ○ ○ ○

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

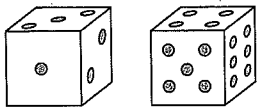
Which set of fractions is ordered from smallest to largest?

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

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

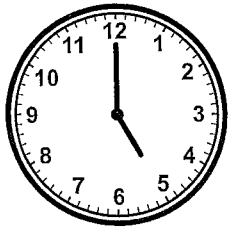
Write your answer in the box.

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

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NATIONAL ASSESSMENT PROGRAM
LITERACY AND NUMERACY

NUMERACY
CALCULATOR ALLOWED

YEAR 7

2009

1052913 1

128_129 7N

FIRST NAME: _____

LAST NAME: _____

Date of Birth: ____/____/_____ GENDER: _____

SOUTH SYDNEY HIGH SCHOOL

530_8545

5308545 4

7404444

STUDENT TO COMPLETE

Please print your first name and last name below. Write in capital letters.

FIRST NAME _____ LAST NAME _____

TEACHER TO COMPLETE

Please indicate if any of the following apply for this test session. The student was

○ absent ○ exempt ○ withdrawn ○ sanctioned abandonment

Books for students in these categories MUST NOT be returned for processing.

Please indicate if student received special provisions to complete this test session.

The student accessed the following special provisions:

○ Large Print ○ Braille ○ Assistive technology ○ Oral sign support

○ Adjustable furniture ○ Separate supervision ○ Extra time ○ Scribe

○ Other (specify) _____ ○ Reader

The student is enrolled in a Support Class: ○ yes

0-10 SESSION 1 Time available for students to complete test: 40 minutes

Use 2B pencil only

PRACTICE QUESTIONS

P1 50, 100, 150, 200, 250, ?

Shade one bubble.

Which number comes next in this sequence?

251	260	300	350
○	○	○	○

P2 Jim gets paid $10 per hour.
He worked for 5 hours.

How much did Jim earn?

Write your answer in the box.

$ _____

P3 $1 = 100 cents

Complete the table.

$	cents
1	100
2	200
5	

P4 Write one half as a fraction.

Write your answer in the boxes.

_____
_____

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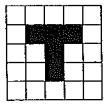
CALCULATOR ALLOWED

7-4-03

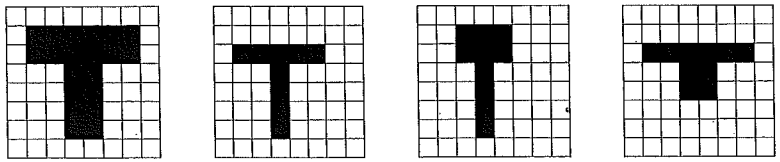
Trevor drew this shape on a grid.

Shade one bubble.



He then doubled the height and width of the shape.

Which drawing shows this?



○ ○ ○ ○

■ = 2

▲ = 3

● + ■ = ▲ + ▲

Which number does ● equal?

2 ○ 3 ○ 4 ○ 6 ○

In 1894, women were granted the right to vote in South Australia.

By 2009, women in South Australia will have been able to vote for

113 years. ○ 115 years. ○ 125 years. ○ 215 years. ○

4 Edward travelled 110 kilometres in 2 hours.

What was his average speed in kilometres per hour?

Shade one bubble.

50 ○ 55 ○ 70 ○ 220 ○

5 Two places are 4.7 cm apart on a map.
On the map 1 cm represents 5 km.

What is the actual distance between the two places?

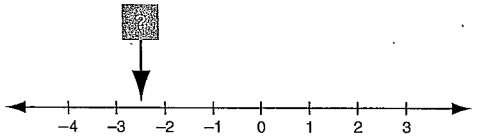
1.06 km ○ 9.4 km ○ 23.5 km ○ 47 km ○

6 The area of Australia is 7 686 850 square kilometres.

What is this area rounded to the nearest thousand square kilometres?

7 000 000 ○ 7 600 000 ○ 7 686 000 ○ 7 687 000 ○

7



Write your answer in the box.

The arrow points to a position on the number line.

What number is at this position? ☐

8 Sean wrote a number on a piece of paper.
If he multiplied his number by 5 and then divided by 2,
the answer would be 30.

What was Sean's number? ☐

CALCULATOR ALLOWED

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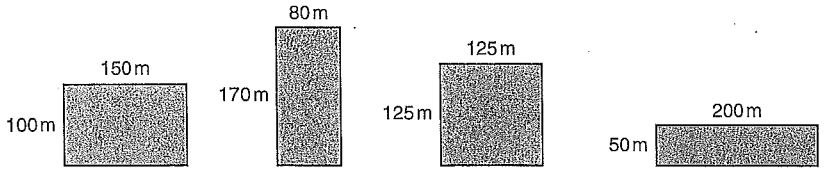
A farm has 4 paddocks.

Which paddock has the largest area?

Shade one bubble.



A water tank has a capacity of 6.25 kilolitres.

How many **litres** does the water tank hold when it is full?

625 ○ 6025 ○ 6250 ○ 62 500 ○

Four families flew to Australia.
The airline allows each person to have 22 kg of luggage.

Family name	Number of people	Mass of family luggage
Nguyen		61 kg
Boyd		87 kg
Clarke		111 kg
Agostini		131 kg

Which family had more than 22 kg of luggage per person?

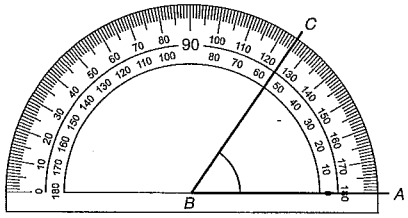
Nguyen ○ Boyd ○ Clarke ○ Agostini ○

12 What number will make this number sentence true?

Write your answer in the box.

$4.52 + 3.68 = \square + 3.70$

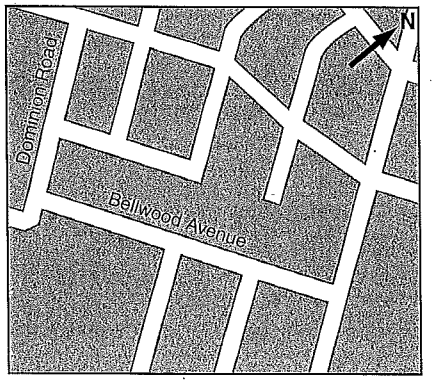
13



What is the size of angle *ABC*? ☐°

14

Shade one bubble.



Tara is travelling along Bellwood Avenue towards Dominion Road.

What direction is Tara travelling?

North-East ○ North-West ○ South-East ○ South-West ○

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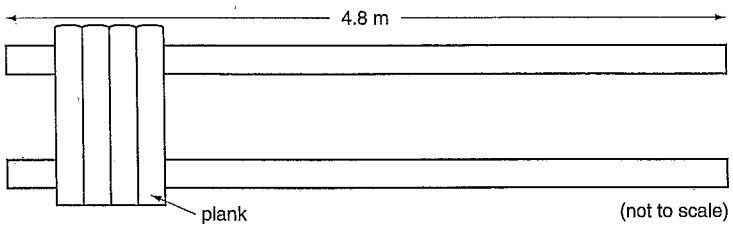
CALCULATOR ALLOWED

Sam is building a wooden fence that is 4.8 metres long.
He is using planks that are all 0.12 metres wide.
There are no gaps between the planks.

Shade one bubble.



How should Sam calculate how many planks he will need altogether?

- ○ $4.8 \div 0.12$
- ○ $0.12 \div 4.8$
- ○ 4.8×0.12
- ○ $4.8 - 0.12$

$45 \times ◆ = 18$

What is the value of ◆?

$\frac{2}{5}$	$\frac{3}{5}$	$\frac{5}{2}$	$\frac{5}{3}$
○	○	○	○

Alex bought 3 pieces of fish and a $2 bag of chips.
The cost was $11.90.

What would 2 pieces of fish and a $1 bag of chips cost?

$9.90	$8.90	$8.60	$7.60
○	○	○	○

18 Zoe bought a bike on sale at 15% off the original price.
The original price was $420.

Shade one bubble.

How much did Zoe pay for the bike?

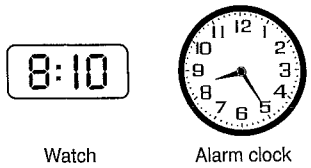
$63	$357	$378	$405
○	○	○	○

19 A vase has 18 flowers in it.
12 flowers are blue.

What fraction of the flowers are blue?

$\frac{18}{12}$	$\frac{6}{12}$	$\frac{3}{4}$	$\frac{2}{3}$
○	○	○	○

20 Harry sets his watch and his alarm clock to different times.



Watch

Alarm clock

When his alarm clock shows  what time does his watch show?

11:50	10:50	12:20	11:55
○	○	○	○

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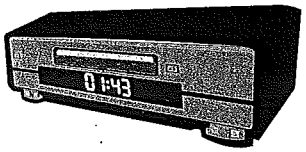
CALCULATOR ALLOWED

The DVD player shows the time of day as 01:43.
The movie still has 53 minutes to run.

Write your answer in the box.



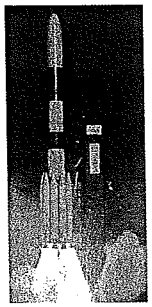
What time will the DVD player show at the end of the movie? [:]

This calculation gives the average speed (kilometres per hour) of a rocket over a small time interval.

$$\frac{62.735 - 6.855}{0.04}$$

What is the average speed of the rocket?

[ ] kilometres per hour



The diameter of a $2 coin is about 2 cm.

Shade one bubble.

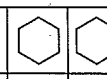
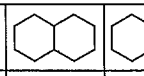
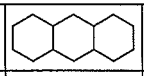
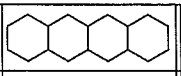
...

About how much would a 1 km line of $2 coins be worth?

$1000	$5000	$20 000	$100 000
○	○	○	○

24 This hexagon pattern is made with sticks.

Shade one bubble.

Hexagons					
Number of hexagons	1	2	3	4	10
Number of sticks	6	11	16	21	?

How many sticks are needed to make 10 of these hexagons?

51	53	55	60
○	○	○	○

25 The mean (average) of five numbers is 34.
One more number is added and the mean becomes 35.
The number added is

34	35	40	69
○	○	○	○

26 Emma used identical cubes to build a rectangular prism.
There were 12 cubes in its base.
She used 60 cubes altogether.
Which of these could be the dimensions of Emma's prism?

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

27 A rule to calculate the amount of medicine (mL) a child needs is:

Child amount = (*Adult amount* × *Age of child*) ÷ (*Age of child* + 12)

Use this rule to complete the table.

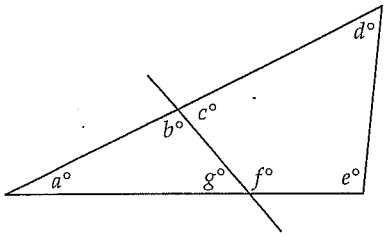
Write your answer in the box.

Adult amount (mL)	Age of child (years)	Child amount (mL)
10	8	

A triangle is divided into 2 parts by a straight line.

The angles are then labelled.

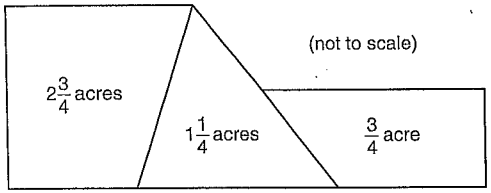
Shade one bubble.



Which statement is true about the sum of angles?

- ○ $a+b+c=180$
- ○ $c+d+e+f=360$
- ○ $a+b+g=360$
- ○ $a+g+f+e=180$

This plan shows 3 blocks of land.
Their areas are measured in **acres**.



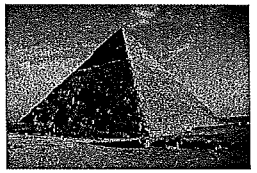
1 hectare = 2.47 acres

The total area of the 3 blocks in **hectares** is closest to

1.82	1.92	4.75	11.73
○	○	○	○

30 This pyramid has a square base.

Write your answer in the box.



The area of the square base is 52 900 m².

What is the length (m) of **one side** of the base? ☐ m

31 Carlos has 3 times as many orange trees as lemon trees.
Altogether he has 76 trees.

How many **orange** trees does he have? ☐

32 Sue draws a polygon.
It has a certain number of 120° angles
and the same number of 150° angles.
It has no other angles.

Shade one bubble.

The polygon is

a pentagon.	a hexagon.	an octagon.	a decagon.
○	○	○	○

END OF TEST

CALCULATORS ALLOWED