MCEECDYA
Ministerial Council for Education,
Early Childhood Development and Youth Affairs

NATIONAL ASSESSMENT PROGRAM
LITERACY AND NUMERACY

YEAR
7
2010

NUMERACY
CALCULATOR ALLOWED

SESSION 1

0:40

Time available for students to complete test: 40 minutes

Use 2B or HB pencil **only**

Do not write on this page.

PRACTICE QUESTIONS

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

Shade one bubble.

Which number comes next in this sequence?

251	260	300	350
⬭	⬭	⬭	⬭

P2 Use numbers to write one dollar and seventy-five cents.

Write your answer in the box.

$ ☐

P3 268 cents equals

Write your answer in the boxes.

☐ dollars and ☐ cents.

P4 Twenty-seven can be written as

2	7

Seventy-six can be written as

1 This is part of Laura's school timetable.

Shade one bubble.

Start time	Monday	Tuesday	Wednesday
8:45 am	English Room 9	Mathematics Room 21	English Room 21
10:30 am	Recess	Recess	Recess
10:45 am	Mathematics Room 22	English Room 15	Music Room 9
12:15 pm	Lunch	Lunch	Lunch
1:05 pm	Health Room 21	Art Room 11	Mathematics Room 15
2:00 pm	Sport Gym	Science Room 22	Science Room 22

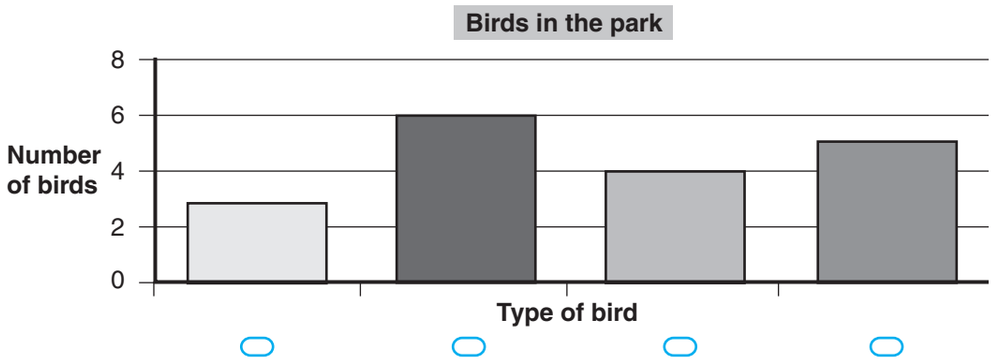
What room is Laura in at 1:45 pm on Wednesday?

Room 22 ⬭ Room 21 ⬭ Room 15 ⬭ Room 9 ⬭

2 For 3 days, Bella made a tally of the birds she saw in a park.
This table shows her results.

Type of bird	Monday	Tuesday	Wednesday
Kookaburra	||		|
Magpie	|	||	|
Galah	|||	||	
Rosella		||||	||

Which column on the graph below shows the total number of Galahs?



⬭ ⬭ ⬭ ⬭

3 A tap is dripping into a bucket.
This table shows the total number of drops in the bucket after each minute.

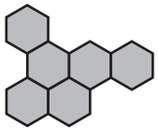
Minutes	Total number of drops
1	3
2	6
3	9
4	12

Shade one bubble.

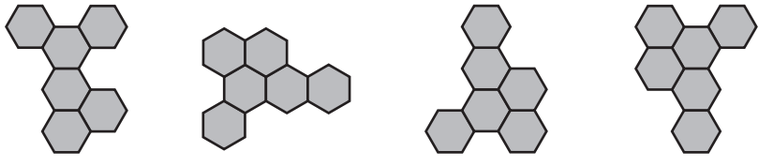
How many drops are in the bucket after 10 minutes?

15 ⬭ 20 ⬭ 25 ⬭ 30 ⬭

4 Joe made this design by joining six tiles together.
The tiles are grey on all faces.

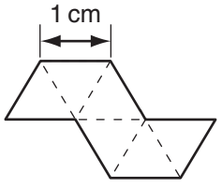


Which of these could **not** be Joe's design?



⬭ ⬭ ⬭ ⬭

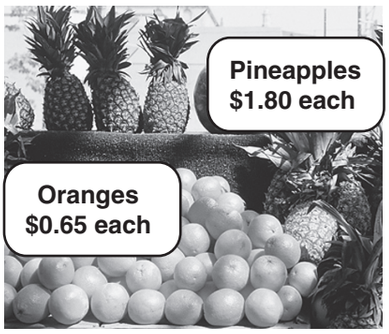
5 This shape is made with 6 equilateral triangles.



What is the perimeter of the shape?

6 cm ⬭ 8 cm ⬭ 10 cm ⬭ 18 cm ⬭

6



Write your answer in the box.

Alan buys 5 oranges and one pineapple from this market stall.

How much does Alan pay for the fruit **altogether**? $ ____ .

7

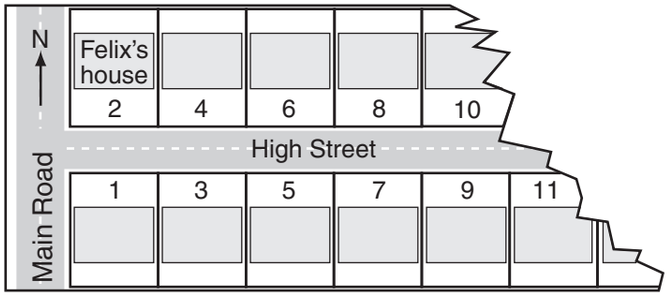
Shade one bubble.

Which of these is the best estimate for the mass of this hammer?

30 grams	300 grams	30 kilograms	300 kilograms
⬭	⬭	⬭	⬭

8

This is part of the map of High Street.
Felix lives at number 2 which is the 1st house on the north side.



What is the number of the 18th house in High Street on the north side?

9	18	36	38
⬭	⬭	⬭	⬭

Use the following information for questions 9 and 10.

Shade one bubble.

This table shows the number of people who attended sport training on weekdays over 4 weeks.

DAILY ATTENDANCE				
	Week 1	**Week 2**	**Week 3**	**Week 4**
Monday	82	44	39	63
Tuesday	77	56	75	58
Wednesday	55	52	59	67
Thursday	35	41	37	39
Friday	28	24	32	24

9 Which day had the greatest total attendance over the 4 weeks?

Monday ⬭ Tuesday ⬭ Wednesday ⬭ Thursday ⬭

10 What was the mean (average) number of people who attended sport training on Fridays?

24 ⬭ 26 ⬭ 27 ⬭ 28 ⬭

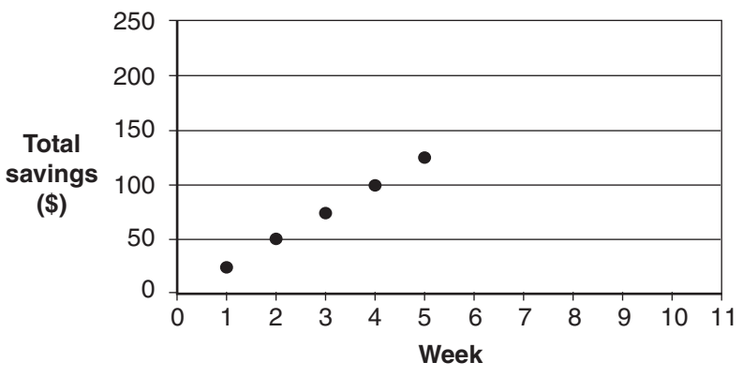
11 In a netball season, Josie had 480 shots for goal.
She scored 210 goals and missed the rest.

Josie's success rate of scoring goals was

⬭ less than 25%
⬭ more than 25% but less than 50%
⬭ more than 50% but less than 75%
⬭ more than 75%

12 Kate saves the same amount of money each week.
At the end of each week she adds a point to this graph of her total savings.

Kate's savings graph



Write your answer in the box.

What will be the **exact** total amount saved by Kate at the end of week 9?

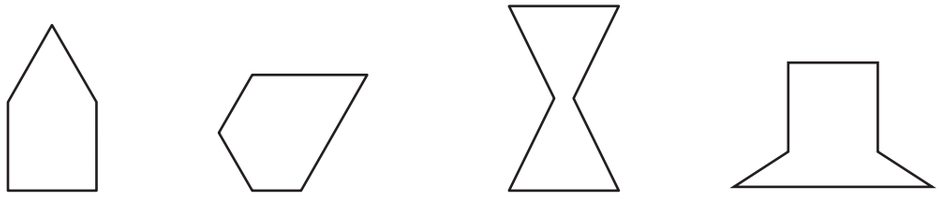
$ ____

13 Luke drew a shape with:

- exactly 2 pairs of parallel sides, and
- exactly 2 acute angles.

Shade one bubble.

Which drawing could be Luke's?



○ ○ ○ ○

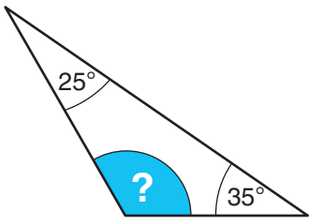
14 Helen paid $4465 for some sheep.
She paid the same amount of money for each sheep.
The cost of each sheep was a whole number of dollars.

Which of the following could be the number of sheep Helen bought?

43	45	47	49
○	○	○	○

15

Shade one bubble.



What is the size of the shaded angle?

115° ⬭ 120° ⬭ 130° ⬭ 145° ⬭

16

Last year 3684 people went to a music festival.
The number of people who went to the festival this year was $\frac{2}{3}$ of last year's figure.

How many people went to the festival this year?

1228 ⬭ 2442 ⬭ 2456 ⬭ 5526 ⬭

17

The fractions $\frac{9}{10}$ and $\frac{1}{5}$ have been shaded on this fraction wall.

One whole									
$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$
$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$	

What is $\frac{9}{10} - \frac{1}{5}$ equal to?

$\frac{8}{5}$ ⬭ $\frac{7}{10}$ ⬭ $\frac{8}{10}$ ⬭ $\frac{9}{10}$ ⬭

Music Festival: Troy Cassar-Daley at the 2003 Galston Country Music Festival (Photo by Bob Howe).

18 A prize of $5934 is shared equally among 15 friends.

How much does each person get in **dollars** and **cents**?

Write your answer in the boxes.

[ ] dollars and [ ] cents

19 Zoe is 3 years **older** than Sarah.
Emma is 4 years **older** than Sarah.

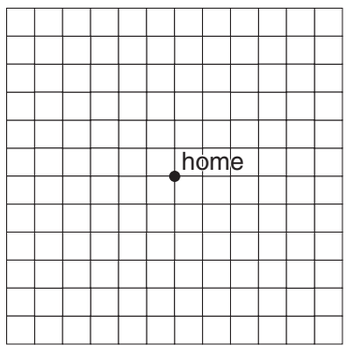
Shade one bubble.

Which equation shows how Zoe's age relates to Emma's age?

- ○ Zoe's age = Emma's age – 1
- ○ Zoe's age = Emma's age + 1
- ○ Zoe's age = Emma's age – 7
- ○ Zoe's age = Emma's age + 7

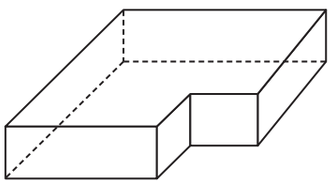
20 Adam leaves home and cycles 6 km west, then 4 km north.
He records this trip as 6W, 4N.

Which of these trips takes Adam home again?



- ○ 3W, 2N, 3W, 2N
- ○ 2W, 2N, 4W, 6S
- ○ 3E, 2S, 3E, 4S
- ○ 2E, 2N, 4E, 6S

21 This diagram represents a 3D object.



The object is a

- ○ hexagonal prism.
- ○ hexagonal pyramid.
- ○ rectangular prism.
- ○ rectangular pyramid.

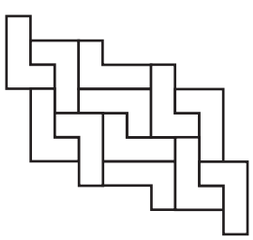
22 Which of these numbers is a multiple of both 7 and 11?

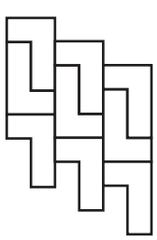
Shade one bubble.

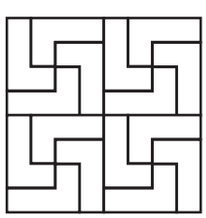
711 ⬭ 777 ⬭ 7117 ⬭ 7777 ⬭

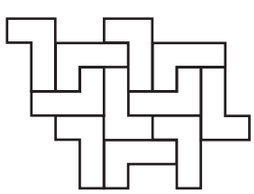
23 Harry has these L-shaped tiles.
They are white on one side and black on the other side.
Harry wants to make a pattern with all the tiles **white** side up.

Which one of these patterns can Harry **not** make?


⬭

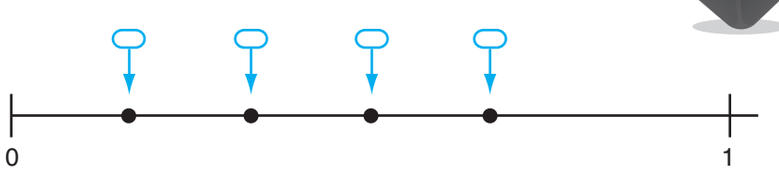

⬭


⬭


⬭

24 Kim throws a standard 6-sided die.

Which point on the number line best shows the chance of Kim throwing a 2?



25 An electrician calculates the price of a job using a service fee and an amount **per hour**.
This table shows some of the job prices.

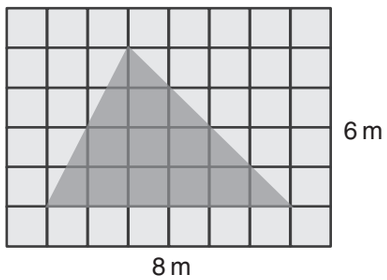
Hours	2	4	5	6
Job price	$160	$252	$298	$344

How are the job prices calculated?

⬭ $80 service fee + $40 per hour
⬭ $80 service fee + $80 per hour
⬭ $68 service fee + $92 per hour
⬭ $68 service fee + $46 per hour

26 This rectangular courtyard measures 6 m by 8 m.
A triangle is marked out on the courtyard.

Write your answer in the box.



What is the area of the triangle? ☐ square metres

27 Jamie surveyed all the Year 7 students at his school about their favourite sport.

Favourite sport	Number of students
Basketball	85
Cricket	35
Football	55
Netball	75

Shade one bubble.

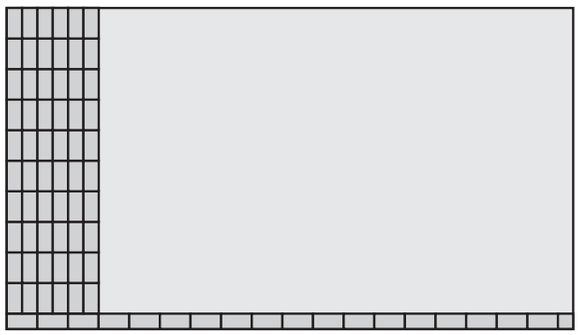
Which sport did 3 out of every 10 Year 7 students choose as their favourite?

Basketball ⬭ Cricket ⬭ Football ⬭ Netball ⬭

28 Dan has started to cover a rectangular floor with tiles.
The tiles are twice as long as they are wide.

Write your answer in the box.

The floor is $10\frac{1}{2}$ tiles wide and $18\frac{1}{2}$ tiles long.



Using this pattern, what is the **total** number of tiles Dan will use to cover the floor?

☐

29 Rob is building a brick wall that is 6 metres long.
The length of a row of 15 bricks is 3.6 metres as shown.

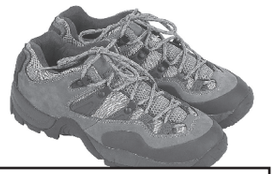
Write your answer in the box.

3.6 metres

How many bricks will Rob need for a row 6 metres long? ☐

30 A shoe shop has a sale.

Was $95
Sale price is 20% off



Was $90
Sale price is 25% off

What is the **difference** in the sale prices of these two pairs of shoes?

$ ☐

31 A gardening company uses the following rule to calculate the cost of sand.

cost in dollars = ($49.50 × *volume in cubic metres*) + ($5.90 × *delivery distance in km*)

Michelle paid the company $653 for
12 cubic metres of sand.

What delivery distance was Michelle charged for?

☐ km

32 Pam's new car uses 4.9 litres of fuel per 100 km.
Her old car used 7.5 litres of fuel per 100 km.
Pam pays $1.10 per litre and drives 10 000 km each year.

How much money will Pam **save** on fuel each year with her new car?

$ ☐

STOP – END OF TEST

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NATIONAL ASSESSMENT PROGRAM
LITERACY AND NUMERACY

YEAR
7
2010

NUMERACY
NON-CALCULATOR

SESSION 2

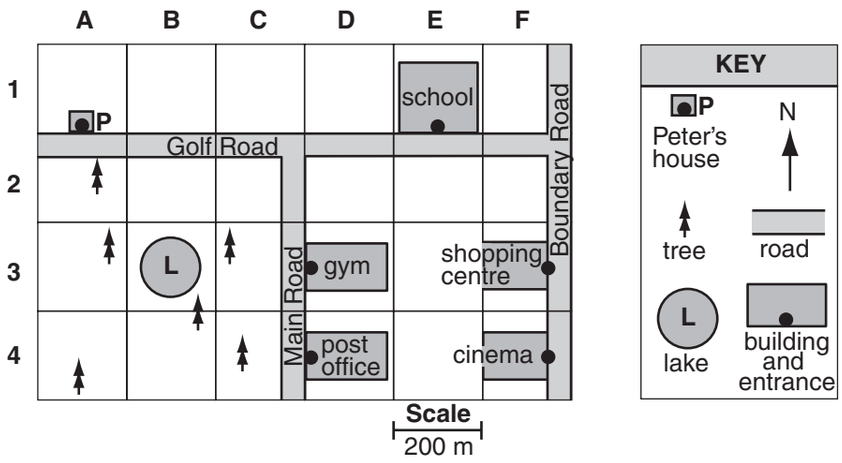
0:40

Time available for students to complete test: 40 minutes

Use 2B or HB pencil **only**

1 Peter drew a map of his neighbourhood.

Shade one bubble.



What is the grid reference of the lake?

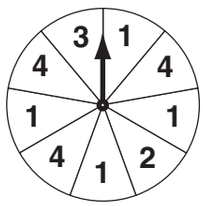
A1 ⬭ A3 ⬭ B3 ⬭ B4 ⬭

2 A country football game between the Dogs and the Tigers was attended by 525 people.
The Dogs had 218 supporters.
The rest supported the Tigers.

How many people supported the Tigers?

343 ⬭ 317 ⬭ 313 ⬭ 307 ⬭

3 This spinner is used in a board game.



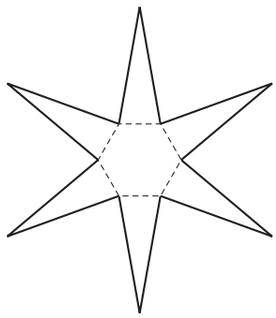
Sanjay spins the arrow.

On which number is the arrow **most** likely to stop?

1 ⬭ **2** ⬭ **3** ⬭ **4** ⬭

4 Angela made this net.

What 3D object will it make?



Shade one bubble.

- ⬭ hexagonal prism
- ⬭ octagonal prism
- ⬭ hexagonal pyramid
- ⬭ octagonal pyramid

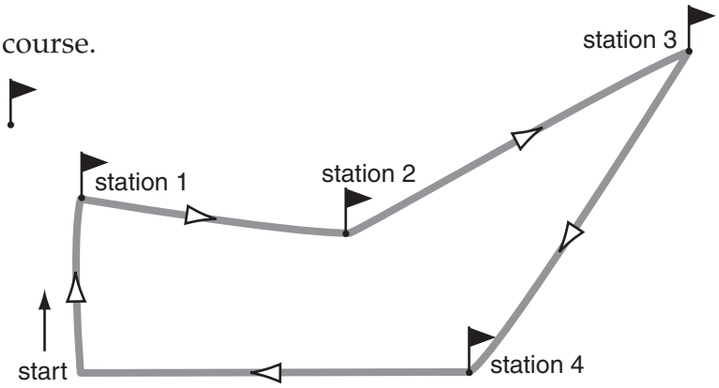
5 Anne wants to find the answer to 1999 + 1476.

Which of these shows a way to get the **same** answer?

- ⬭ 2000 + 1477
- ⬭ 2000 + 1475
- ⬭ 2005 + 1400
- ⬭ 2005 + 1500

6 This is a map of a running course.

There are 4 drink stations.



At which drink station do the runners make the **greatest** change of direction?

station 1	station 2	station 3	station 4
⬭	⬭	⬭	⬭

7 Ryan bought these 4 items.

Shade one bubble.

The total mass of Ryan's items is **closest** to

3 kg	4 kg	8 kg	9 kg
⬭	⬭	⬭	⬭

8 The picture shows a stone head.

The picture is 3 cm high. The actual head is 60 cm high.

What scale is used in the picture?

- ⬭ 3 cm represents 20 cm
- ⬭ 6 cm represents 30 cm
- ⬭ 1 cm represents 2 cm
- ⬭ 1 cm represents 20 cm

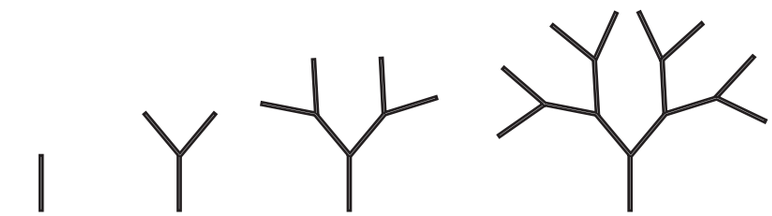
9 Three of these calculations give the same value.

Which one gives a **different** value?

241 × 1	1 × 241	241 ÷ 1	1 ÷ 241
⬭	⬭	⬭	⬭

10 Lucy made 4 tree designs using sticks.
There is a pattern in the way the trees grow.

Shade one bubble.



Tree 1
1 stick

Tree 2
3 sticks

Tree 3
7 sticks

Tree 4
15 sticks

Lucy continues the pattern in the same way.

How many sticks will Tree 5 have?

23	31	35	45
⬭	⬭	⬭	⬭

11 Jenny is exactly 3 years old.
Her brother Ken is exactly 17 months old.

How many months older than Ken is Jenny?

13	14	19	21
⬭	⬭	⬭	⬭

12 A flea can jump up to 200 times its body length.
The body length of the flea is 2.5 mm.

What is the furthest distance the flea can jump?

5 mm	50 mm	500 mm	5000 mm
⬭	⬭	⬭	⬭

13 A set of traffic lights is red for half the time, orange for $\frac{1}{10}$ of the time and green for the rest of the time.

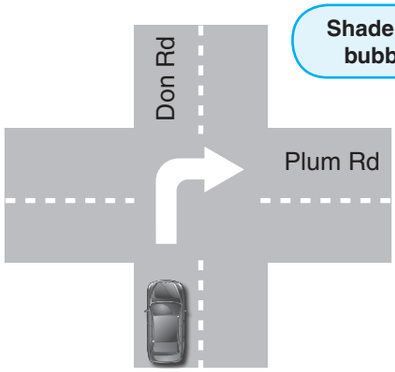
For what fraction of the time is the set of traffic lights green?

$\frac{1}{3}$	$\frac{2}{5}$	$\frac{6}{10}$	$\frac{10}{12}$
⬭	⬭	⬭	⬭

14 A car is travelling **north-east** along Don Road.
The car is about to turn right into Plum Road.

In which direction will the car be travelling **after** it turns right?

- north-east
- south-west
- north-west
- south-east



Shade one bubble.

15 Which metric unit would a builder use to measure the volume of sand in a truck like this?

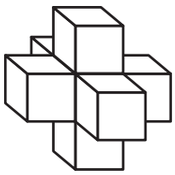
- cubic metres
- square metres
- cubic centimetres
- square centimetres

16 Write a number in the box to make this number sentence correct.

$24 + 15 >$ ☐ $\times 5$

Write your answer in the box.

17 This 3D symmetrical object is made by joining cubes.
It is then painted.

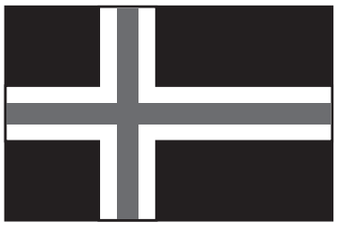


How many faces are painted?

☐

18

Shade one bubble.



How many lines of symmetry does the design on this flag have?

4	3	2	1
⬭	⬭	⬭	⬭

19

$37.9 \times 10 =$

3790	3709	37.90	379
⬭	⬭	⬭	⬭

20

When it is 12 noon in Melbourne, it is 10 am in Singapore on the same day.
A plane leaves Melbourne at 11:30 am Melbourne time and flies to Singapore.
The flight takes 6 hours and 50 minutes.

What is the time in Singapore when the plane arrives?

4:20 pm	5:20 pm	6:20 pm	8:20 pm
⬭	⬭	⬭	⬭

21

Which percentage has the same value as $\frac{44}{50}$?

94%	88%	44%	22%
⬭	⬭	⬭	⬭

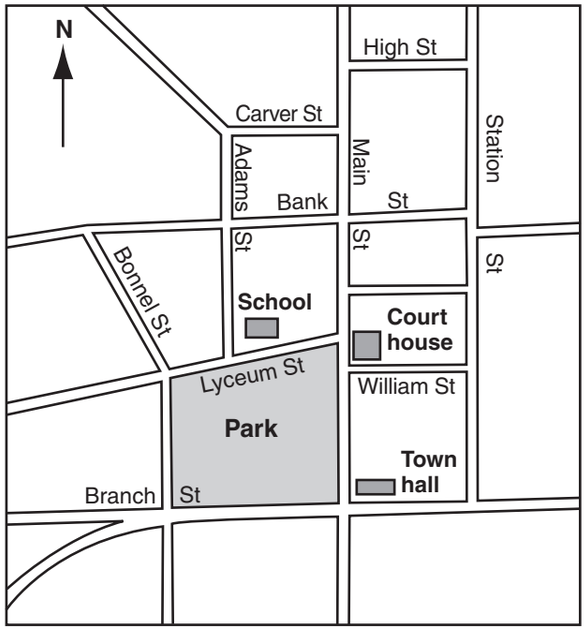
22

Which of these is the longest distance?

0.1203 km	123 m	1230 cm	12 030 mm
⬭	⬭	⬭	⬭

23 Jill lives in a street that runs directly north–south.
Her house is north of the park and west of the school.

Shade one bubble.



What street does Jill live in?

Adams St ⬭ Bonnel St ⬭ Station St ⬭ Main St ⬭

24 A grocer buys 25 boxes of melons.
Each box costs $28.
The total cost of the boxes is $28 × 25.

Which calculation is another way of working out the total cost?

7 × 100 ⬭ 18 × 250 ⬭ (56 ÷ 2) × 50 ⬭ 8 + (20 × 25) ⬭

25 These are four number cards.

Write your answer in the boxes.

0	2	4	5

Use each card once to make this number sentence true.

$\square\square\square \times \square = 2010$

26 A meeting is held on the first Tuesday of each month.
There was a meeting held on 6 March.

Write your answer in the box.

What is the date of the April meeting?

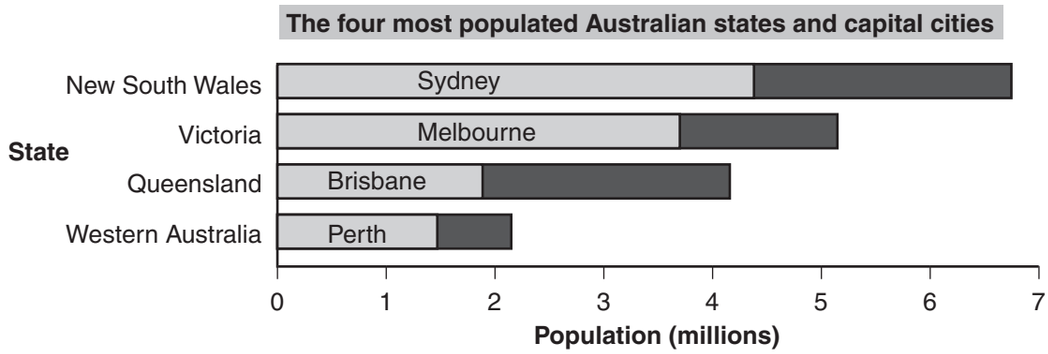
_____ April

27 This Ferris wheel turns at a constant speed.
It takes 4 minutes to turn through a complete circle.

What angle does the Ferris wheel turn through in 90 seconds? _____ °

28 Each bar of this graph shows the population of a state and the population of its capital city.

Shade one bubble.



Which of these states has the **lowest percentage** of its population living in its capital city?

- ⬭ New South Wales
- ⬭ Victoria
- ⬭ Queensland
- ⬭ Western Australia

29 Ben has 2 identical pizzas.
He cuts one pizza equally into 4 large slices.
He then cuts the other pizza equally into 8 small slices.
A large slice weighs 32 grams more than a small slice.

Write your answer in the box.

What is the mass of **one** whole pizza?

☐ grams

30 This is the label from a can of soup.

Write your answer in the box.

Soup Delight
RICH 'N' RED
Tomato

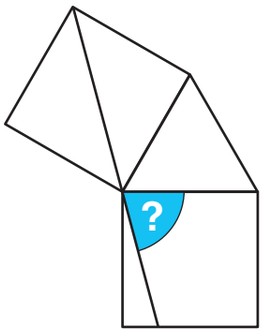
	Quantity	
	Per 100 g	**One serve**
ENERGY	150 kJ	450 kJ
PROTEIN	0.6 g	1.8 g
FAT	0.3 g	0.9 g
CARBOHYDRATE	6.9 g	20.7 g
- SUGARS	6.3 g	18.9 g
SODIUM	345 mg	1035 mg

What is the mass of one serve of this soup? _____ grams

31 Peta has some plums to give to her friends.
If she gives each friend 4 plums, she will have 6 plums left over.
She cannot give each friend 5 plums because she would need 4 more plums.

How many plums does Peta have? _____

32 Two squares are drawn on the sides of an equilateral triangle as shown.
A straight line is then drawn through the point where the 3 shapes touch.



What is the size of the shaded angle? _____ °

STOP – END OF TEST