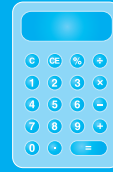**YEAR 7**
2014

NUMERACY
CALCULATOR ALLOWED

SESSION 1

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

Use 2B or HB pencil **only**

1

A total of 301 617 babies were born in Australia in 2011.

Of these babies, 146 621 were girls.

How many boys were born in Australia in 2011?

154 996	245 016	301 617	448 238
⬭	⬭	⬭	⬭

2

This table shows some information about Australia's 10 tallest structures.

Name of structure	Height (m)	Location
Omega Mast	427	Woodside
Holt Main Mast	389	Exmouth
Holt Outer Mast	364	Exmouth
Q1 Tower	322	Gold Coast
Sydney Tower	309	Sydney
Holt Inner Mast	304	Exmouth
Eureka Tower	297	Melbourne
The Rialto	270	Melbourne
MIM Stack	270	Mount Isa
120 Collins St	264	Melbourne

How much taller than Melbourne's tallest structure is Sydney's tallest structure?

12 metres	39 metres	118 metres	130 metres
⬭	⬭	⬭	⬭

3

What time is shown on the clock?

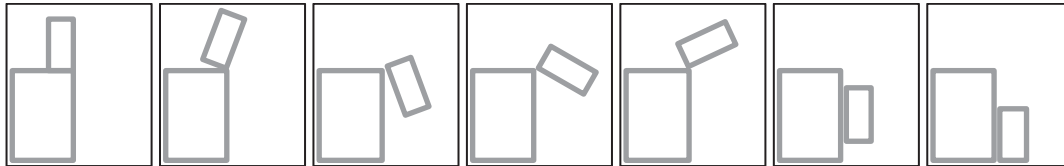| 2:10	2:51	10:11	11:11
◯	◯	◯	◯

4

Lisa is making an animation of a block falling over.

The picture shows seven frames of her animation.

| frame 1 | frame 2 | frame 3 | frame 4 | frame 5 | frame 6 | frame 7 |

She has accidentally swapped two frames.

Which two frames were swapped?

- ◯ frame 3 and frame 4
- ◯ frame 3 and frame 5
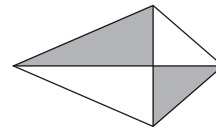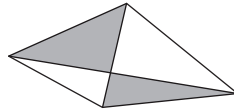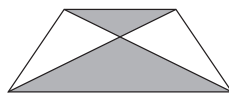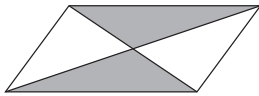- ◯ frame 4 and frame 5
- ◯ frame 5 and frame 6

5 Sarah rolls a standard 6-sided dice once.

Which of these is Sarah most likely to roll?

○ a number greater than 4

○ a number less than 5

○ an odd number

○ the number 6

6 In which of these are the two shaded triangles the same size and shape?

○   ○   ○   ○

7 Neela bought 3 loaves of bread and 2 bottles of milk.

She used this calculation to work out the total cost:

$2 \times 0.99 + 3 \times 2.25$
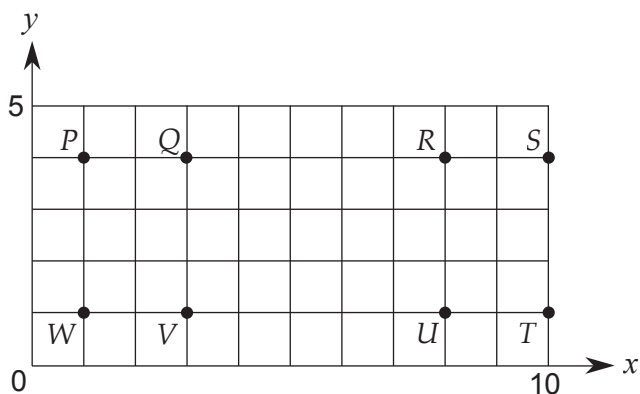
How much did one loaf of bread cost?

$0.99 $2 $2.25 $3

○   ○   ○   ○

8

Sam plotted some points on a grid.

He then joined some of the points together with lines.

Which of these pairs of lines are parallel?

PW and PS	PT and WS	PV and RT	PU and QU
⬭	⬭	⬭	⬭

9

Swimming pool entry costs $2.80 per child.

How many children can enter for $10?

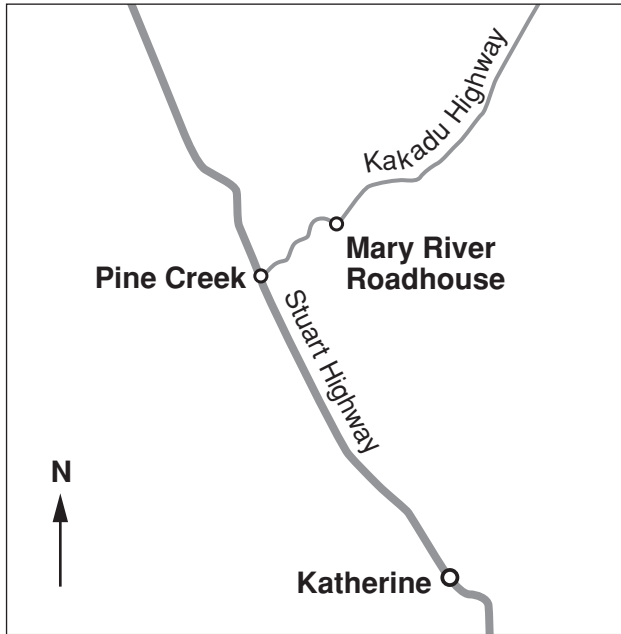| 3	4	5	28
⬭	⬭	⬭	⬭

10

Tom is at the Mary River Roadhouse.

Which of these directions should Tom follow to get to Katherine?

⬭ Go south-east to Pine Creek, then turn left.

⬭ Go south-west to Pine Creek, then turn left.

⬭ Go south-east to Pine Creek, then turn right.

⬭ Go south-west to Pine Creek, then turn right.

11

Wheelchair access ramps have a rise of 1 metre for every 14 metres of base length.
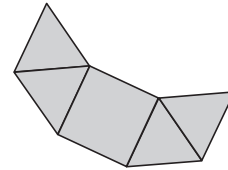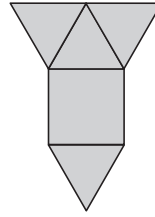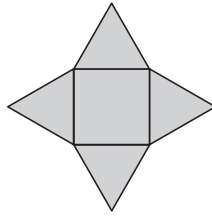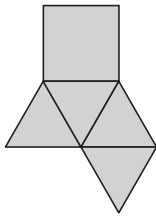

not to scale
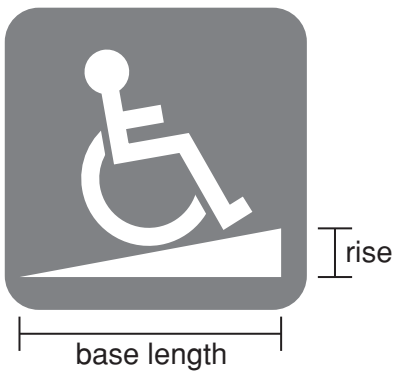
What is the base length for a ramp with a rise of 0.4 metres?

5.6 metres	13.4 metres	14.4 metres	35.0 metres
⬭	⬭	⬭	⬭

12 Which of these is **not** a net of a square pyramid?

○　　　　　　○　　　　　　○　　　　　　○

13 Which of these lists contains only prime numbers?

2, 3, 4, 5　　　　2, 5, 9, 11　　　　2, 5, 11, 13　　　　11, 13, 15, 17

○　　　　　　○　　　　　　○　　　　　　○

14 Sue has only 10-cent, 20-cent and 50-cent coins in her pocket.

In total she has $2.80.

What is the smallest number of coins she could have?

5　　　　　6　　　　　7　　　　　8　　　　　9

○　　　　○　　　　○　　　　○　　　　○

15 Paul takes part in a swimathon to raise money.

He has two sponsors.

His father donates $2.50 for each lap of the pool that Paul swims.

His grandmother donates $10 in total.

How many laps does Paul need to swim to raise $100?

8　　　　　10　　　　　36　　　　　40　　　　　44

○　　　　○　　　　○　　　　○　　　　○

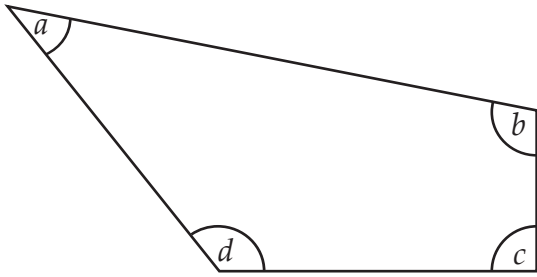**16** What is the whole number closest in value to 5.8^2?

11　　　　　12　　　　　33　　　　　34　　　　　36

○　　　　○　　　　○　　　　○　　　　○

17

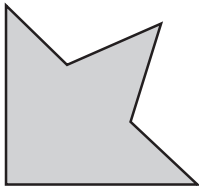Which of the angles in this shape is closest to 100°?
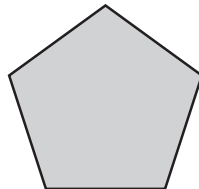
a	b	c	d
○	○	○	○

18

Which of these is a hexagon?

○	○	○	○
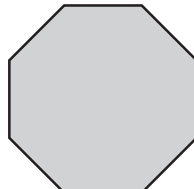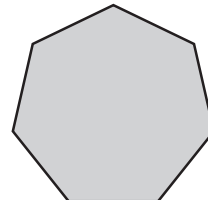
19

This indicator measures the depth of water in a lake.

metres
10
9
8
7
6
5

water level
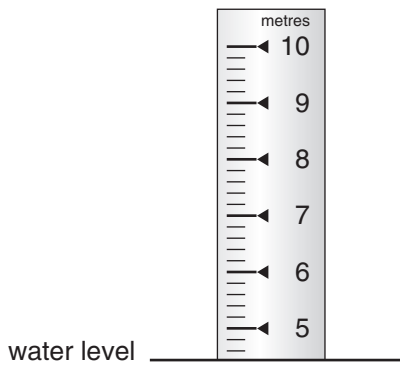
What is the depth of the water?

4.2 metres	4.4 metres	4.7 metres	5.3 metres	5.6 metres
○	○	○	○	○

20 On this map the distance from the rocks to the waterhole is 4 cm.

hill

waterhole

4 cm

rocks

Scale 1 : 20 000
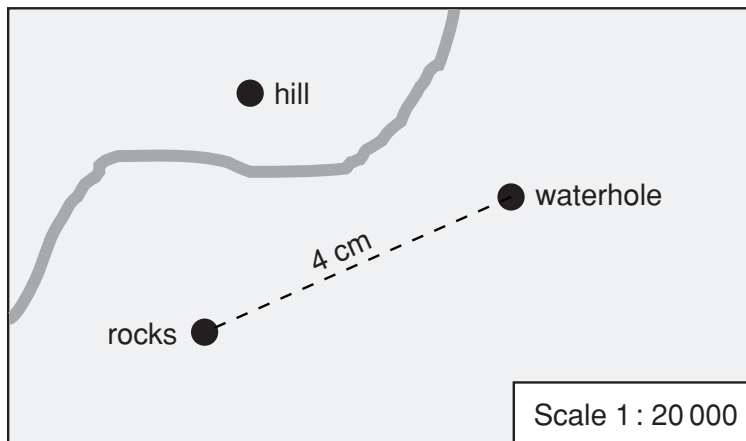
What is the actual distance from the rocks to the waterhole?

50 m	80 m	500 m	800 m
⬭	⬭	⬭	⬭

21 A shop sells fruit drinks in three sizes: small, medium and large.

A medium drink costs $1.50 more than a small drink.

A large drink costs $2.75 more than a small drink.

Which of these equations is correct?

- ⬭ *cost of a medium drink = cost of a large drink – $1.25*
- ⬭ *cost of a medium drink = cost of a large drink – $1.50*
- ⬭ *cost of a medium drink = cost of a large drink – $2.75*
- ⬭ *cost of a medium drink = cost of a large drink – $4.25*

22 Dan plans to leave Alice Springs at 9:30 am and drive through Kulgera to Finke.

He finds this table of driving times.

Alice Springs to Kulgera	2 hours 50 minutes
Kulgera to Finke	1 hour 45 minutes

Dan plans to have a 30-minute rest stop at Kulgera.

Using these driving times and rest time, when should Dan arrive in Finke?
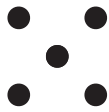
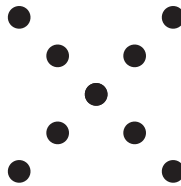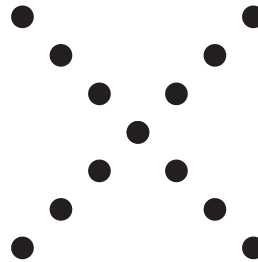| about 1:00 pm	about 1:30 pm	about 2:00 pm	about 2:30 pm
⬭	⬭	⬭	⬭

23 In this pattern, the number of dots in each arm of the cross increases by the same amount each time.

Cross 1   Cross 2   Cross 3

How many dots are in Cross 20?

---

24 The rule

$$depth = 4.9 \times (time)^2$$

can be used to calculate the *depth* of a mine shaft in metres, where *time* is the number of seconds it takes a stone dropped from the top of the mine shaft to reach the bottom.

Which of these is closest to the *depth* of the mine shaft for a *time* of 3.5 seconds?

12 metres	17 metres	34 metres	60 metres	294 metres
⬭	⬭	⬭	⬭	⬭

---

25 Annie's phone plan costs $35 per month.

A special offer for cable TV is available with this phone plan.

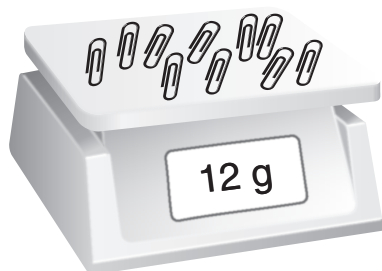The total cost for the phone plan and cable TV is $1368 for 12 months.

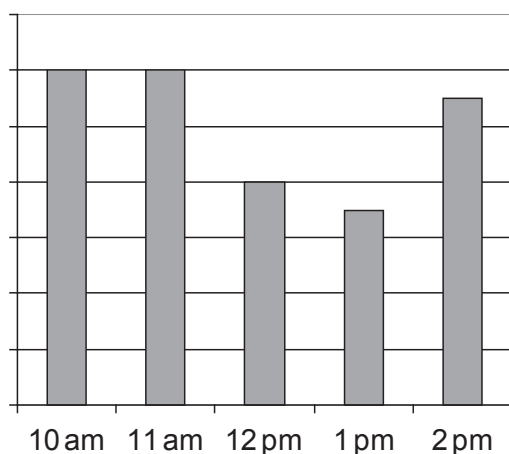What is the extra monthly cost for cable TV?

$

26 Ten paperclips have a mass of 12 grams.

12 g   420 g

How many paperclips have a mass of 420 grams?

27 Jamie recorded the number of cars in the school car park at set times during a day.

He created a column graph but left off some labels.

10 am 11 am 12 pm 1 pm 2 pm

In total he recorded 100 cars.

How many cars were in the school car park at 2 pm?

28 Mandy is a goal shooter for her netball team.

- At her first practice, Mandy shot 50 goals.
- At her second practice, Mandy shot 20% more goals than at her first practice.
- At her third practice, Mandy shot 10% more goals than at her second practice.

How many goals did Mandy shoot at her third practice?

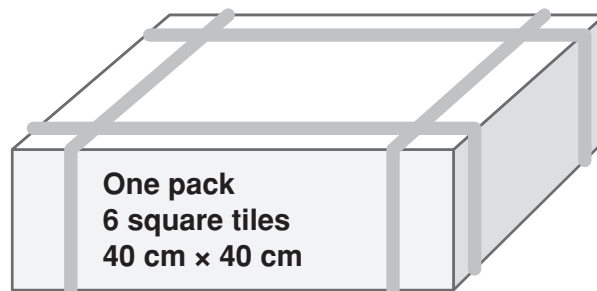**29** Mike drew all the lines of symmetry on a regular pentagon.
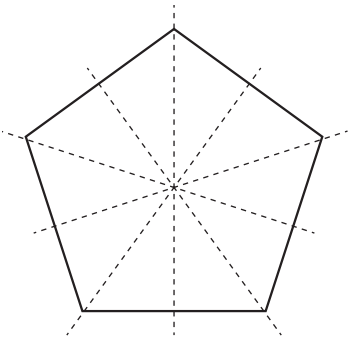
What was the size of the smallest angle between the lines of symmetry?

_____ degrees

---

30 Alex has a rectangular room, 3.2 metres long and 2.4 metres wide.

She wants to cover the floor of her room with these square tiles.

**One pack
6 square tiles
40 cm × 40 cm**

How many packs of tiles does Alex need?

31 One litre of fruit juice contains 60 grams of sugar.

How many millilitres of fruit juice contain 1.5 grams of sugar?

| | millilitres

32 David counted the birds in his garden.

$\frac{1}{3}$ of the birds were cockatoos and $\frac{1}{4}$ were pigeons.

He saw 6 more cockatoos than pigeons.

How many birds did David see?

18	24	42	72
◯	◯	◯	◯

STOP – END OF TEST

Do not turn this page.