YEAR 7

2012

NUMERACY
NON-CALCULATOR

SESSION 2

0:40 Time available for students to complete test: 40 minutes

Use 2B or HB pencil **only**

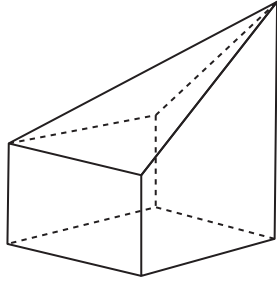**1** The diagram shows a solid 3D object.

How many faces does it have?

7   8   9   11

○   ○   ○   ○

2 Which number sentence is correct when **?** is replaced by 5?

$15 +$ **?** $= 10$ **?** $- 6 = 1$ $10 -$ **?** $= 5$ $11 + 6 =$ **?**

○   ○   ○   ○

3 Steven left for school at 8:45 am. He got to school at 9:06 am.

How long did it take Steven to get to school?

15 minutes   21 minutes   51 minutes   61 minutes

○   ○   ○   ○

4 $176.8 + 32.4 =$ **?**

198.2   199.2   208.2   209.2   500.8

○   ○   ○   ○   ○

5 Alana made some cookie men.

Each cookie man had 2 star lollies and 3 round lollies.
Alana used 48 round lollies altogether.

How many **star** lollies did Alana use?

16	24	32	48	96
⬭	⬭	⬭	⬭	⬭

6 Megan tosses a normal coin four times.
It lands heads up each time.
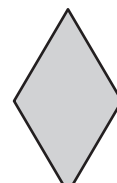She tosses it a fifth time.

Which of the following is true?

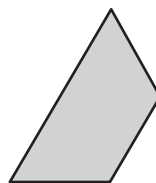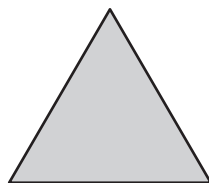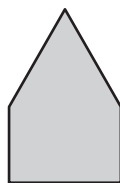- ⬭ It is more likely to land heads up than tails up.
- ⬭ It is certain to land tails up.
- ⬭ It has an equal chance of landing heads up or tails up.
- ⬭ It is more likely to land tails up than heads up.

7 Sandy drew a shape.
It has three sides equal in length and only one side that is longer.

Which of these could be Sandy's shape?

⬭   ⬭   ⬭   ⬭

8

Lydia starts with a number.
She doubles it and then subtracts 4 to get an answer of 8.

What number did Lydia start with?

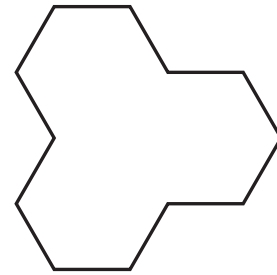| 6	8	12	24
○	○	○	○

9

Lucas put three identical tiles together at their edges.

He drew around the outside to make this new shape.

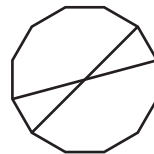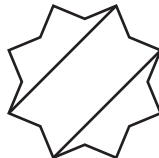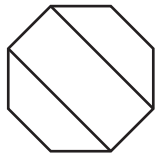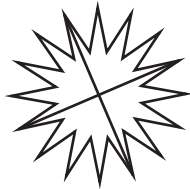Which of these could have been the shape of his tiles?

triangles	trapeziums	pentagons	hexagons
○	○	○	○

10

Which of these designs looks identical after a quarter turn?

○	○	○	○

11

Jasim is trying to write down all the prime numbers less than 20.

She writes: 2, 3, 5, 7, 11, 13, 19

Which number is missing?

9	15	17	23
○	○	○	○

12 Dean uses the same rule to change each ▲ into a ■.

▲	■
2	4
3	7
7	19

Which of these rules did Dean use?

○ ■ = ▲ × 1 + 2

○ ■ = ▲ × 2 + 5

○ ■ = ▲ × 3 − 2

○ ■ = ▲ × 4 − 5

13 Jane got out of bed at 7:30 am.

She went back to bed $13\frac{1}{2}$ hours later.

At what time did she go back to bed?

8:30 pm	9:00 pm	10:30 pm	11:00 pm
○	○	○	○

14 Dave is making a pattern of tiles.
At each stage, tiles are added to edges that don't already have a tile on them as shown.

Stage 1	Stage 2	Stage 3	Stage 4
1 tile	4 tiles	10 tiles	19 tiles

What is the total number of tiles needed for Stage 5?
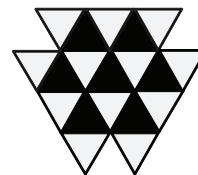
22	28	31	33
○	○	○	○

15 This USB drive can hold 16 gigabytes of data in its memory.

At the moment, 12 gigabytes of memory has been used.

What percentage of the memory has **not** been used?

4%	25%	34%	40%	75%
○	○	○	○	○

16 A standard six-sided dice is rolled.

Which of the following events has a probability less than 1?

- ○ rolling a number greater than 0
- ○ rolling a number less than or equal to 7
- ○ rolling a number greater than or equal to 1
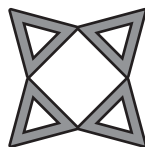- ○ rolling a number greater than or equal to 6

17 Kim has an ink stamp that makes this shape.

Kim makes each of these designs by stamping the shape four times.

Which of Kim's designs has **only two** lines of symmetry?

| ○ | ○ | ○ | ○ |

18

To make a syrup, 3 cups of water must be used for every 4 cups of sugar.

How many cups of water are needed for 6 cups of sugar?
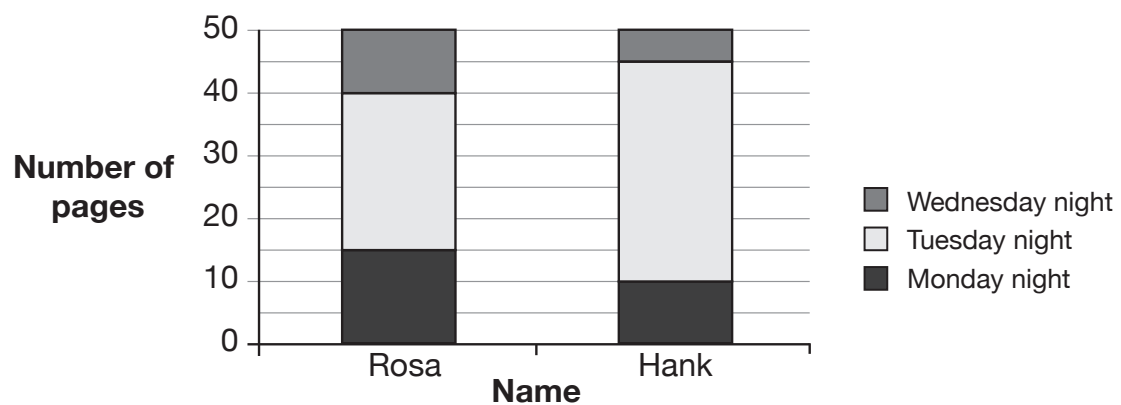
1.5 cups	4.5 cups	5 cups	8 cups
⊖	⊖	⊖	⊖

19

Rosa and Hank both read books with 50 pages.
This chart shows the total number of pages they read.

How many **more** pages did Hank read than Rosa on Tuesday night?

20

Nathan lives in Brisbane. Kareena lives in Mumbai.
When it is 10:25 am in Brisbane it is 5:55 am in Mumbai on the same day.

Kareena rings Nathan when it is 9:00 am in Mumbai.

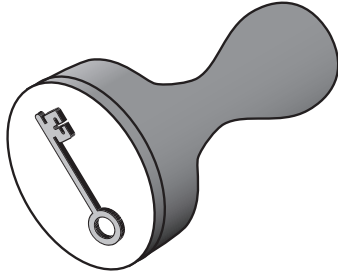What time is it in Brisbane?

1:00 pm	1:30 pm	2:00 pm	2:30 pm
⊖	⊖	⊖	⊖

21 This is a stamp.

It makes a key shape.

Which one of these shapes can the stamp make?

22 Cody, Liam and Molly have 60 stickers in total.
Cody has half as many stickers as Liam.
Molly has three times as many stickers as Cody.

How many stickers does Cody have?

23 There are 600 vehicles in a car park.
One-third of them are trucks. The rest are cars. One-quarter of the cars are white.

How many white cars are in the car park?

24 Which of these is true for the value of 170 × 0.1?

- ⬭ less than 170
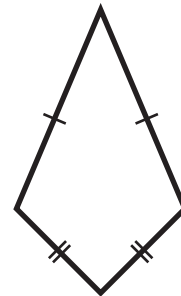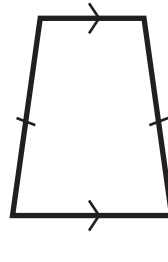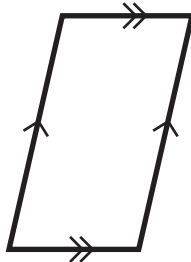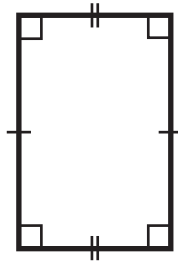- ⬭ equal to 170
- ⬭ greater than 170

25 Bindi made 36 muffins. Some of the muffins were apple and some were pear. Both kinds of muffins looked the same.

Tegan took a muffin. She had a 1 in 9 chance of taking a pear muffin.

How many **apple** muffins did Bindi make?

```
┌──────────────┐
│              │
└──────────────┘
```

26 Which one of these shapes has diagonals that cross at right-angles?

⬭   ⬭   ⬭   ⬭

27 Dale is a beekeeper.
The mass of 500 millilitres of Dale's honey is 700 grams.

How many **litres** is 3.5 kilograms of Dale's honey?

```
┌──────────────┐
│              │ litres
└──────────────┘
```

28 Sarah bought two full bags of sand.
Both bags had the same amount of sand in them.

After she used $\frac{1}{4}$ of one bag of sand, she had a total of 35 kilograms of sand left.

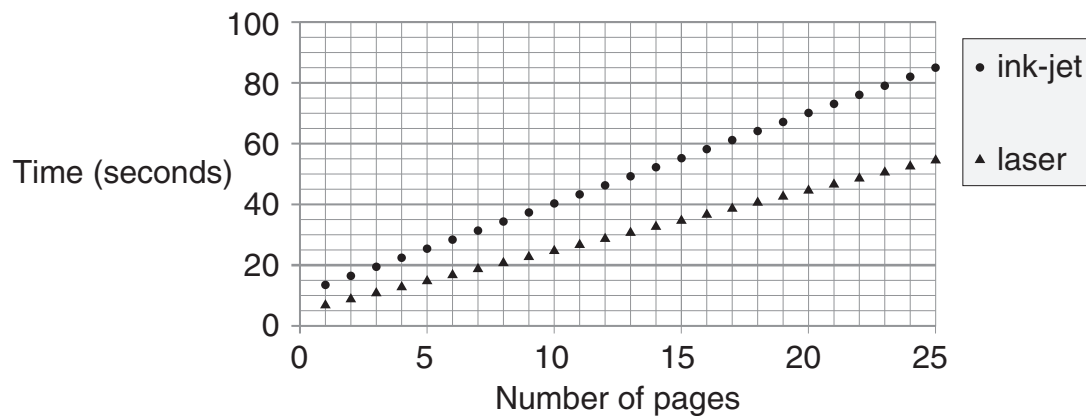How many kilograms of sand were in one full bag?

☐ kilograms

29 A school office has an ink-jet printer and a laser printer.
The ink-jet printer takes 10 seconds to start and then prints 20 pages per minute.
The laser printer takes 5 seconds to start and then prints 30 pages per minute.

A teacher prints a document that takes 70 seconds to print on the ink-jet printer.
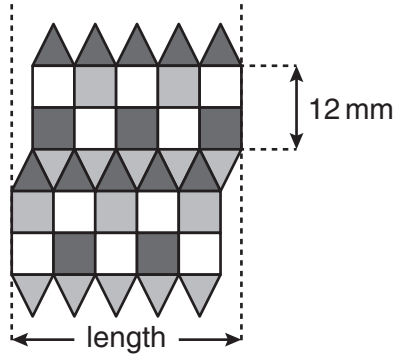
How long would it take to print on the laser printer?

☐ seconds

30 This design is made out of squares and equilateral triangles.

12 mm

length

What is the length of the design?
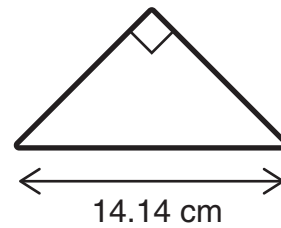
_____ millimetres

31 This triangle was made by cutting a square in half.

The perimeter of the triangle is 34.14 cm.

What is the area of the triangle?

_____ square centimetres

14.14 cm

STOP – END OF TEST