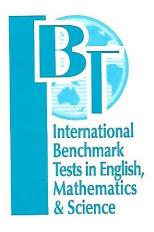
2016





# **Mathematics**

### **TEST INSTRUCTIONS**

### **FILL IN YOUR DETAILS**

Turn to your ANSWER SHEET and fill in your name, school, grade, section, today's date, your date of birth and gender.

#### **ANSWERING QUESTIONS**

Go to the MATHEMATICS ANSWER SHEET.

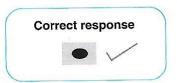
This test has 40 QUESTIONS. Each question has four possible options.

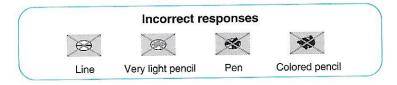
Choose the BEST answer from the four options, A, B, C or D.

FILL in ONE circle on your answer sheet with a pencil.

If you make a mistake, erase the pencil mark and fill in a different circle.

You must colour the entire circle as shown below:





Marks are NOT deducted for incorrect answers.

# ALL ANSWERS SHOULD BE MARKED ON YOUR ANSWER SHEET ONLY.

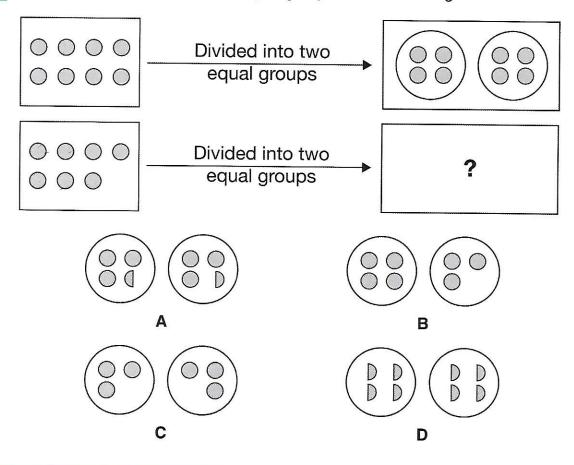
### **EQUIPMENT ALLOWED IN THIS TEST**

You may use a 2B or B pencil for this test. You may NOT use a calculator for this test.

### TIME ALLOWED FOR TEST

The time allowed to complete this test is 60 minutes.

1 Which diagram shows the two equal groups that are missing?



A newspaper sold 46453 copies today.

Yesterday it sold 42879 copies.

How many more copies were sold today?

3574

4426

4574

4684

A

B

C

D

What is the next number in the pattern below?

0.7, 0.07, 0.007,

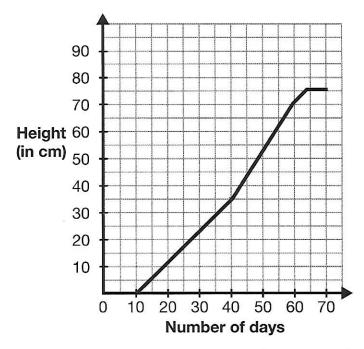
**A** 0.00007

**B** 0.0007

**C** 0.007

4 A student planted a seed and recorded how the plant grew.

The graph shows the height of the plant over the next 70 days.



What was the height of the plant after 40 days?

35 cm

45 cm

75 cm

90 cm

A

В

C

D

A scientist measures the temperature at different distances below the Earth's surface.

This table shows her results.

Distance below the Earth's surface (metres)	Temperature (°C)
0 m	20 °C
30 m _	21 °C
60 m	22 °C
90 m	23 °C
120 m	24 °C

What is the temperature at 75 m below the Earth's surface?

20 °C

22.2 °C

22.5 °C

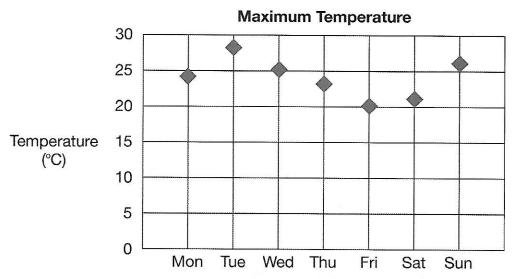
23 °C

A

В

C

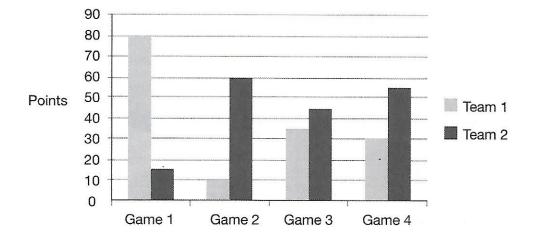
6 This graph shows the maximum temperature recorded in a city on seven days.



What was the maximum temperature on Tuesday?

6 °C 23 °C 25 °C 28 °C **A B C D** 

Two basketball teams played four games against each other.
This graph shows the points scored by the two teams.

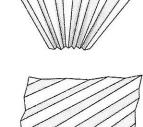


What was the greatest difference in points between the teams in a game?

10 50 65 80 A B C D

A worker needs 488 tiles to pave a floor. Tiles come in packs of 20. How many packs does the worker need? 20 24 25 В C

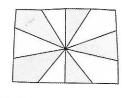
This fan is made by folding a sheet of paper. How will the paper look when it is unfolded?



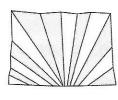
488

D

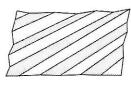
A



В



C



D

- A train departs at 08:30 and reaches its destination at 17:10. How long is the train journey?
  - 5 hours 20 minutes
  - 8 hours 40 minutes
  - C 9 hours
  - 9 hours 20 minutes
- A machine sorts 252 pens into packets.

Each packet contains 12 pens.

How many packets are there?

12

21

201

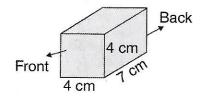
240

A

В

C

12 This figure shows a rectangular prism (cuboid).



What is the length of the sides of its back face?

3 cm

4 cm

5 cm

7 cm

A

В

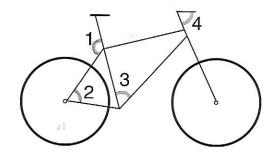
C

D

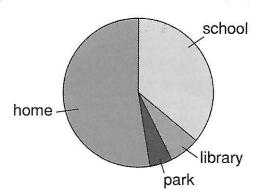
13 Four angles are marked on the bicycle.

Which angle is the largest?

- A angle 1
- B angle 2
- C angle 3
- D angle 4



14 This graph shows where a boy spent his time one day.



Where did the boy spend most of his day?

school

library

park

home

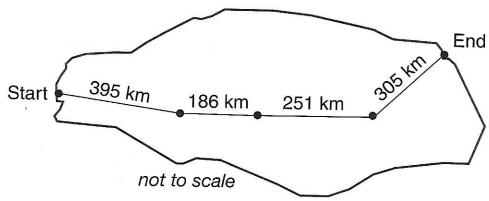
Α

В

C

$$\frac{3}{4} + \frac{1}{8} =$$

- A car drives across a country using the route shown between different cities.



How far did the car drive?

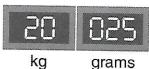
- 827 km
- 832 km
- 1137 km
- 1237 km

A

В

C

- D
- These displays show the masses of two suitcases in kilograms (kg) and grams.



grams



kg grams

What is the difference between the masses of the two suitcases?

- A 6 kilograms and 275 grams
- В 7 kilograms and 725 grams
- 11 kilograms and 755 grams C
- 13 kilograms and 750 grams

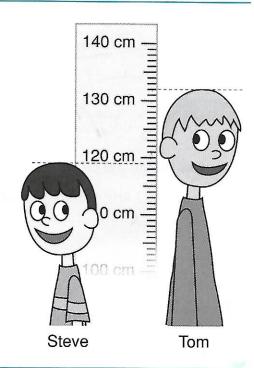
18

4 2 1 3 5

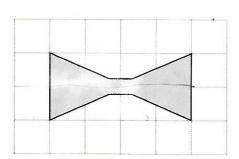
A boy takes one of these cards without looking at the numbers.

What is the chance he takes the number 4?

- A one in one
- B one in three
- C one in four
- D one in five
- 19 How much taller is Tom than Steve?
  - **A** 7 cm
  - **B** 11 cm
  - **C** 13 cm
  - **D** 17 cm



- How many lines of symmetry does this figure have?
  - **A** 1
  - **B** 2
  - **C** 3
  - D 4



A football stadium has 80 000 seats. 63 258 seats have been sold for a game.

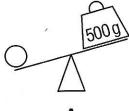
How many seats have not been sold?

- A 16742
- **B** 17258
- C 23258
- **D** 26742
- This ten-sided dice has all the numbers from 0 to 9.

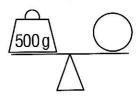


What is the chance of rolling a number that is less than 3 with this dice?

- A 2 out of 8
- **B** 3 out of 9
- C 2 out of 10
- **D** 3 out of 10
- 23 Which ball weighs the most?



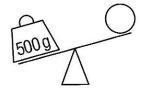
A



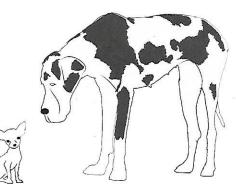
R



C



D



3 kg

45 kg

How many small dogs would weigh the same as the big dog?

- **A** 15
- **B** 21
- C 42
- **D** 48

25  $100 - \stackrel{\wedge}{\cancel{\sim}} = 54$  can be written as:

- **A**  $54 \stackrel{\wedge}{1} = 100$
- **B**  $100 + \stackrel{\wedge}{1} = 54$
- **C**  $^{2}$  100 = 54
- **D**  $54 + \stackrel{\wedge}{1} = 100$

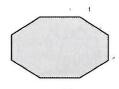
Which of these is a pentagon?



A



B



C



10 students measure the length of their left foot to the nearest centimetre.

The measurements are:

22, 23, 21, 25, 25, 23, 23, 23, 23, 26

What is the difference between the length of the shortest foot and the longest foot?

3 cm

4 cm

5 cm **C** 

6 cm

D

- A girl is making berry muffins using this recipe.

  How many cups of berries will she need to make only 12 muffins?
  - A  $\frac{1}{4}$  cup
  - $\mathbf{B} \quad \frac{3}{4} \operatorname{cup}$
  - C 1 cup
  - D 3 cups

**Berry Muffins** 

## Makes 24 muffins

- $\frac{2}{3}$  cup sugar
- 1 cup milk
- 150 grams butter
- 1 cup self-raising flour
- $1\frac{1}{2}$  cups berries

There are 207 people on a train.

Each person has 2 big bags and 1 small bag.

Which calculation shows how many bags are on the train?

$$\mathbf{A}$$
 207 × 2 × 1

**B** 
$$207 \times (2 + 1)$$

**C** 
$$200 + 7 + 2 + 1$$

**D** 
$$200 \times (7 + 2 + 1)$$

A red car is 400 m ahead of a yellow car and 1 km ahead of a green car. What is the distance between the yellow car and the green car?

300 m

399 m

400 m

600 m

A

В

C

D

A machine can pump 15 litres of water in one minute. How long does it take to pump 900 litres of water?

- A 4 minutes
- B 6 minutes
- C 15 minutes
- D 60 minutes

A school bus picks up students at 7:50 am.
The bus drops them off at school at 8:15 am.
How long does the bus trip take?

15 minutes

25 minutes

35 minutes

65 minutes

A

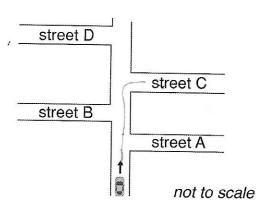
В

C

D

The car turns into the second street on the right.
On which street will the car be after the turn?

- A street A
- B street B
- C street C
- D street D



This table shows types of breezes and their wind speeds.

Type of breeze	Wind speed (km/h)
Gentle breeze	12–19
Moderate breeze	20–28
Fresh breeze	29 <del>.,</del> 38
Strong breeze	39–49

A weather update shows the wind speed at 32 km/h. Which type of breeze is blowing?

- A Gentle breeze
- B Moderate breeze
- C Fresh breeze
- D Strong breeze
- 35 Divide 247 by 13, and then add 45.

Which calculation matches this description?

- **A**  $(247 \div 13) + 45$
- **B**  $247 + (13 \div 45)$
- **C**  $(13 \div 247) + 45$
- **D**  $247 \div (13 + 45)$
- What is the missing number in this pattern?
- 1, 2, 4,  $\bigcap$  , 16

6

8 C 9

A

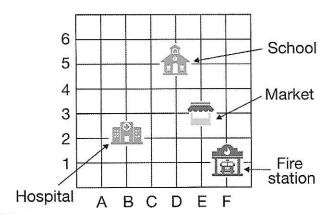
В

D

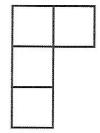
On this map, the school is at (D, 5).

Where is the hospital?

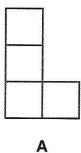
- **A** (B, 2)
- **B** (D, 5)
- **C** (E, 3)
- **D** (F, 1)

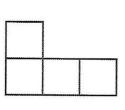


38

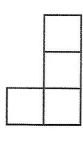


If the above shape gets rotated one-quarter turn clockwise, what does it look like after the rotation?

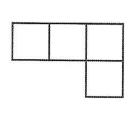




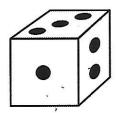
В



C

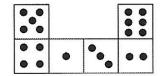


- Which of these numbers is the biggest?
  - A seventy-nine 7 q
  - B four thousand and one 4001
  - **C** eight hundred and twenty-three  $\%^{2,7}$
  - **D** three thousand nine hundred and ninety-nine 30

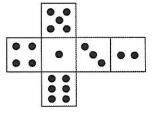


Which of the following shows the net of a six-sided dice?

A



В



С

