11+ MATHEMATICS

SAMPLE EXAMINATION PAPER 1

30 minutes.

Section A - MULTIPLE CHOICE

Circle the correct answer to the questions in this section.

1. The perimeter of a square is 36 cm. What is the **area** of the square?

A: 36 cm^2 B: 81 cm^2 C: 18 cm^2 D: 72 cm^2 E: 100 cm^2

2. Which of these numbers is the smallest?

A: 0.5 B: 0.0501 C: 0.051 D: 0.499 E: 0.49

3. One of the angles in an **isosceles** triangle is 102°, which of these is a possible size of one of the other angles in the triangle?

A: 39° B: 102° C: 98° D: 78° E: 129°

4. Which of these fractions is equal to 0.8?

A: $\frac{1}{8}$ B: $\frac{4}{5}$ C: $\frac{0.8}{10}$ D: $\frac{8}{100}$ E: $\frac{5}{4}$

5. Work out $41 - 7 + 9 \times 2$

A: 84 B: 50 C: 16 D: 86 E: 52

Section B
Show your working when answering these questions

6. Work out $584 - 326$

.....

7. Work out $497 \div 7$

.....

8. Work out leaving any fractions in their **simplest** form

b) $5\frac{4}{11} - 3\frac{8}{11}$

.....

9. Fill in the missing terms of the sequences given by these rules

a) Double the previous term and then subtract 6

4, 2, _____, _____

b) Add four to the previous term

_____, 5, _____, 13

b) The square numbers

_____, 4, _____, 16

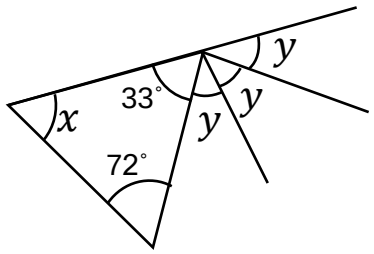
c) The prime numbers

_____, 3, 5, 7, _____

10. A bag of rice contains 360g. A special offer packet contains an extra 15%. Work out how much **extra** rice is in the special offer packet.

……g

11. Work out the size of the angle x and angle y in the diagram.
The diagram is **not** drawn to scale



$x =$ ... ...°

$y =$ ... ...°

12. Work out the mean of 5, 12, 8, 10, 5, 8

.....

b) Another number is added to the list 5, 12, 8, 10, 5, 8, ?

The new mean is 7. What number was added to the list?

.....

13. There are 54 people in Bright Wheels cycling club.

If there are 6 more boys than girls in the club, what is the ratio of boys to girls in the club? Give your answer in its **simplest** form.

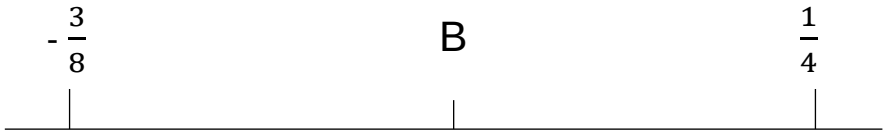
boys**:** girls = ...……**:**……

14. These pictures show parts of a scale with equal gaps between each marking. What number should replace each letter?

(a)

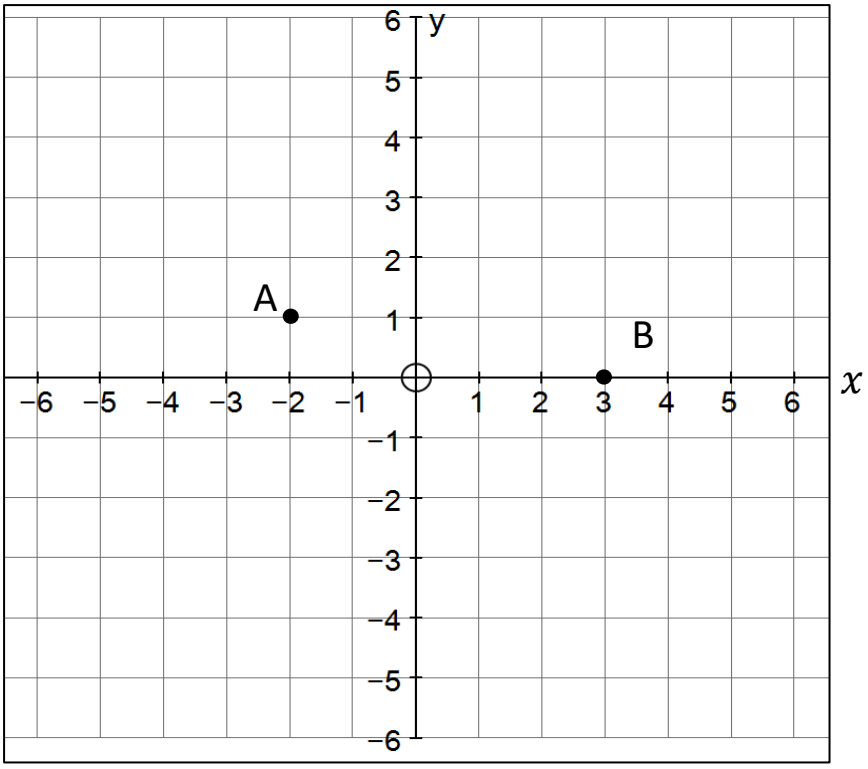
A = ……..

(b)



B = ……..

15. Look at the coordinate grid below.



a) Write down the coordinates of point A and point B.

A(……, ……)

B(……, ……)

b) On the same coordinate grid plot the coordinate C(2, - 2).
Label the coordinate C

c) A fourth point D has x coordinate -3.
The coordinates A, B, C and D are the corners of a parallelogram.

Plot the coordinate D.

d) Reflect the parallelogram ABCD in the y axis

16.

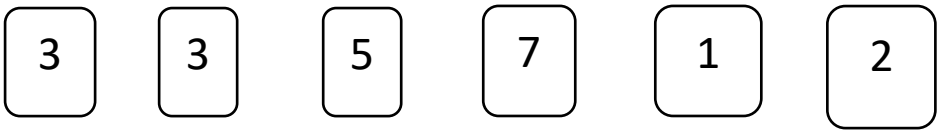
The remainder when 256 is divided by a number is 6.

This statement in the box is only true for one number between 20 and 30.
What is the number?

……..

The next question is only worth **one mark**

17. Use the numbers on the cards below to try to make the number **438**.



You must follow these three rules:

1. You can use addition, subtraction, multiplication, division and brackets to make the answer
2. You cannot make a number by grouping cards together. For example: you cannot make 75 by placing the 7 and 5 card next to each other.
3. You must use each number exactly once.

Use the space below for any rough working.

If you successfully make 437 write clear working out to show the steps in the solution box below, otherwise leave the solution box **empty**.

Rough working

Solution