Foundation GCSE Mini Test 2

1 Decrease £9500 by 7%

2 Alex has some marbles.
Billie has three times as many marbles as Alex.
Chris has 9 fewer marbles than Billie.

In total they have 68 marbles.
How many marbles does Alex have?

3 Here are the first 5 terms of a sequence.

2 9 16 23 30

Find an expression, in terms of n, for the nth term of this sequence.

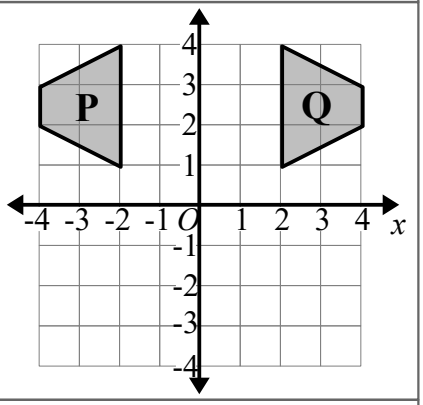
4 The probability that a biased dice will land on a 6 is 0.32

The dice is going to be rolled 200 times.

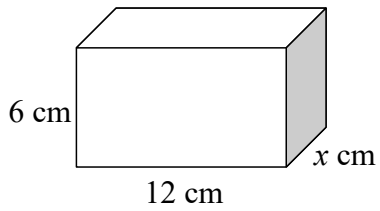
Work out an estimate for the number of times the dice will land on 6.

5 Work out $2\frac{3}{4} + 1\frac{3}{7}$

6 Describe fully the single transformation that maps trapezium **P** on trapezium **Q**.



7 The volume of the cuboid is 360 cm^3.
Find the value of x.



8 A car is 5.7 metres long.

A scale model of the car is being made.

The scale of the model is 1:50

Work out the length of scale model.
Give your answer in centimetres.

9 The size of each exterior angle in a regular polygon is 15°

Work out how many sides the polygon has.

10 The ratio of red pens to green pens is 5:4

Write down the fraction of pens that are red.

11 Work out the mean number of points per game.

Points	Frequency
0	9
10	11
20	18
30	7

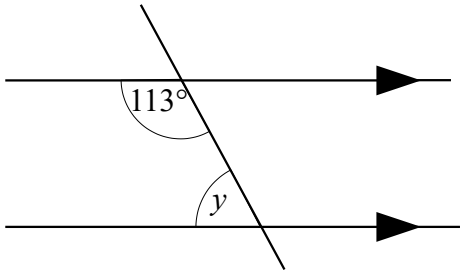
12
Work out an estimate for the value of $\dfrac{50.6 \times 19.21}{0.47}$

13 Simplify $4m^3n^2 \times 5m^2n$

14 Solve $3(2n - 5) < 15$

15 A circle has a diameter of 16 cm.
Work out the circumference of the circle.
Give your answer in terms of π.

16



Write down the size of angle *y*.
Give a reason for your answer.

17 Write 140 as a product of its prime factors.

18 Richard buys a car for £14 000
He sells the car for £9 100

Work out Richard's percentage loss.

19
Carla is on holiday in Italy.
She spends €45 in a restaurant.

The exchange rate is €1 = £0.89

Calculate how much Carla spends in pounds (£).

20
Dave is making cookies.
He mixes flour, butter and sugar in the ratio 5 : 4 : 1

Dave uses 220 grams of butter.
Work out how much flour and sugar Dave uses.