Foundation GCSE Mini Test 2

1 Decrease £9500 by 7%

£8835

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

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

11

3 Here are the first 5 terms of a sequence.

2   9   16   23   30

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

7n - 5

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

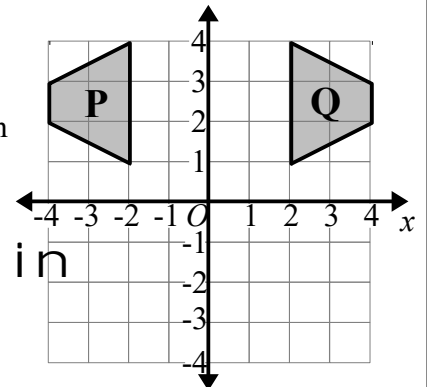The dice is going to be rolled 200 times.

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

64

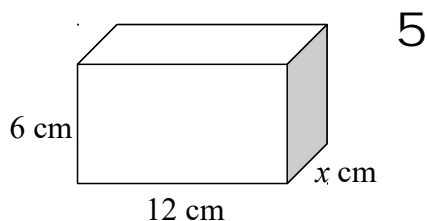**5** Work out $2\frac{3}{4} + 1\frac{3}{7}$

$\frac{117}{28}$ or $4\frac{5}{28}$

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

Reflection in the y axis

7 The volume of the cuboid is 360 cm³.
Find the value of *x*.

6 cm   12 cm   5   *x* cm

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.

11.4 cm

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

Work out how many sides the polygon has.

24

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

Write down the fraction of pens that are red.

$\frac{5}{9}$

11 Work out the mean number of points per game.

Points	Frequency
0	9
10	11
20	18
30	7

15.1

12

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

2000 (or 2040 or 1900)

13 Simplify $4m^3n^2 \times 5m^2n$
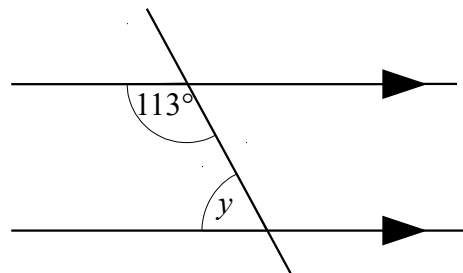
20m⁵n³

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

n < 5

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

16π cm

16

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

67⁰

Colnterior Angles add to 180⁰

17 Write 140 as a product of its prime factors.

2 x 2 x 5 x 7

or 2² x 5 x 7

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

Work out Richard's percentage loss.

35%

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 (£).

£40.05

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.

275 grams of flour

55 grams of sugar