

## 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  $n$ th term of this sequence.

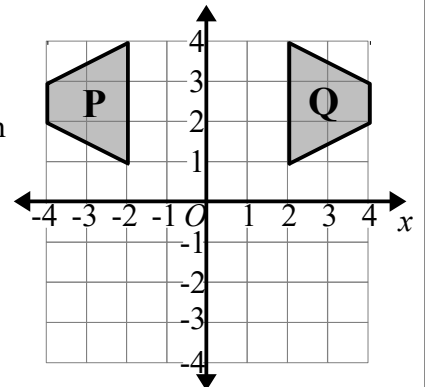
**4** The probability that a biased dice will land on a 6 is 0.32

The dice is going to be rolled 200 times.

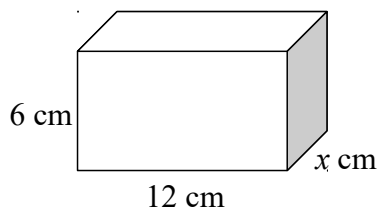
Work out an estimate for the number of times the dice will land on 6.

**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  $360 \text{ cm}^3$ .  
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  $15^\circ$

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  $\frac{50.6 \times 19.21}{0.47}$

**13**

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

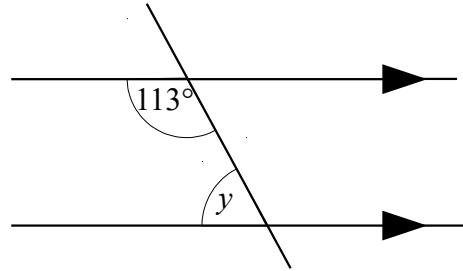
**14**

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  $\pi$ .

**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.