

## Edexcel GCSE Mathematics Non-Calculator 2022 Higher Paper 1 Revision Worksheet

1. Write 500 as a product of powers of its prime factors.
2. Work out  $\frac{1}{3} + 2\frac{1}{4}$ . Give your answer as a mixed number.

A car factory is going to make four different car models **A**, **B**, **C** and **D**.

80 people are asked which of the four models they would be most likely to buy.

The table shows information about the results.

Car model	Number of people
<b>A</b>	23
<b>B</b>	15
<b>C</b>	30
<b>D</b>	12

The factory is going to make 40 000 cars next year.

Work out how many model **B** cars the factory should make next year.

Rizwan writes down three numbers  $a$ ,  $b$  and  $c$

$$a:b = 1:3$$

$$b:c = 6:5$$

5. (a) (i) Find  $a:b:c$

3. Simplify  $(2^{-5} \times 2^8)^2$ . Give your answer as a power of 2.

4.

(ii) Express  $a$  as a fraction of the total of the three numbers  $a$ ,  $b$  and  $c$ .

6.



$\text{pressure} = \frac{\text{force}}{\text{area}}$
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A storage tank exerts a force of 10000 newtons on the ground.

The base of the tank in contact with the ground is a 4 m by 2 m rectangle.

Work out the pressure on the ground due to the tank.

7. Two numbers  $m$  and  $n$  are such that  $m$  is a multiple of 5,  $n$  is an even number, and the highest common factor (HCF) of  $m$  and  $n$  is 7. Write down a possible value for  $m$  and a possible value for  $n$ .
8. Complete the table of values for  $y = 6x - x^3$ :

x	-3	-2	-1	0	1	2	3
y	9		4		-9		

(Fill in the missing values.)

9. Lina spins a biased 5-sided spinner 40 times.

The results are:

Score	1	2	3	4	5
Frequency	6	8	9	7	10

$$5x + 2y = 11$$

$$4x + 3y = 6$$

Lina is now going to spin the spinner another two times. Work out an estimate for the probability that she gets a score of 5 both times.

10. Solve the simultaneous equations:

Find the values of  $x$  and  $y$ .