1) Work out  $\frac{3}{4} \div \frac{1}{6}$ 



2) Work out 1.2 × 2.89

3) Evaluate 3<sup>0</sup>

4) Expand 4a(3 - 2a)

5) Complete 12km/h = ? m/s

1) Find 35% of £460



2) Solve 5x + 6 = 3x - 1

3) Make x the subject of  $y = x^2 - b$ 

4) Find the nth term: 17, 23, 29, 35, ...

5) Work out  $6 \times 3 - (4 + 7)$ 

1) Expand and simplify (x - 3)(x + 2)



2) Work out  $36.3 \times 10^3$ 

3) Distance = 8km, Time = 10 minutes,

Speed = ? km/h

4) Work out  $2\frac{1}{4} \times \frac{2}{3}$ 

5) Express 130 as a product of prime factors

1) Solve 
$$\frac{9x+3}{2} = 5x - 4$$



2) List the first 4 terms of a geometric sequence with a first term of 2 and a common ratio of 3

3) Divide £35 in the ratio 3 : 2

4) Decrease £3400 by 20%

5) Simplify  $(2x^2y)^3$ 

1) 3(4a+b) - 2(a+3b)



2) Work out 
$$2\frac{1}{2} \div 1\frac{2}{3}$$

3) Work out 
$$10 + 5 \times 4 \div 2$$

4) Factorise fully  $24x^3 - 8x$ 

5) Express 314000000 in standard form

1) What is the next term of this sequence:



3, 12, 48, 192, ?

2) Work out  $78 \div 0.3$ 

3) Make *x* the subject of  $y = \frac{x^2}{a}$ 

4) Expand and simplify (x + 10)(x - 3)

5) Simplify  $\frac{2x}{3} + \frac{5x}{4}$ 





2) Factorise  $x^2 - 25$ 

3) If x = -3, find the value of  $2x^2 + x + 3$ 

4) If the n<sup>th</sup> term of a sequence is  $3 \times 2^{n-1}$ , find the 4<sup>th</sup> term

5) Estimate, by rounding each number to 1 significant figure:  $0.531^2 \times 95.8$  1) Find the lowest common multiple of 42 and 60



2) Expand and simplify  $(2x - 3)^2$ 

3) Express 0.00104 in standard form

A block has a mass of 30g and a density of 5g/cm<sup>3</sup>.
Calculate its volume.

5) Make *x* the subject of  $y = (a + b)x^2$ 

1) Find the distance:

Speed = 40 km/h and time = 1 hour 30 mins



2) Factorise  $x^2 + 9x + 20$ 

3) Expand and simplify  $(x^2 - 3)(x + 7)$ 

- 4) Express 0.002003 in standard form
- 5) Find the gradient of the line 2y 6x = 3



1) Make x the subject of  $y = (ax + b)^2$ 



2) Express 
$$\frac{43}{40}$$
 as a percentage

3) Solve 
$$\frac{x+3}{2} + \frac{x}{3} = 11$$

- 4) By rounding each number to 1 significant figure, estimate  $\frac{58^2 \times 3.89}{1.93}$
- 5) Find the first term: ?, 20, 100, 500, 2500, ...

1) Work out 
$$3\frac{1}{2} \div 1\frac{2}{3}$$



2) A price is reduced from £500 to £340. Calculate the percentage change.

3) Expand and simplify (x + 1)(x - 2)(x + 3)

4) Expand and simplify  $(4x - 3)^2$ 

5) What is the 50<sup>th</sup> term of this sequence: 3, 9, 15, 21, ... ?





Write an inequality to show the range of values that *x* could take.

2) Factorise  $2x^2 + 7x + 6$ 

- 3) Work out  $4 \times 10^3 \times 7 \times 10^2$ , giving the answer in standard form
- 4) Find the *y*-intercept of the line 2y 3x = 10



5) Solve  $\frac{x}{3} + 5 = x + 1$