

Starter

1. Multiply out the brackets and simplify

a. $5(x - 8) + 2(x - 2)$ b. $10 - 2(3x - 7)$

2. An alloy contains iron and copper in the ratio of 5:1.

A block of this alloy contains 30 g of iron.

What weight of copper does it contain?

3. Find the following

a. $\frac{1}{6} \times \frac{3}{4}$

b. $2\frac{2}{5} - 1\frac{2}{3}$

c. $2 \div \frac{3}{7}$

4. Solve the following

a. $10x - 6 = 2x + 10$

b. $6 - 3x = 2 - 5x$

c. $4 + 4x = 6x - 1$

Starter

1. Find the range, mode and median of the following numbers

15, 18, 35, 27, 36, 29, 21, 16, 42

2. Find the following

a. $\frac{5}{8} + \frac{2}{3}$

b. $3\frac{1}{3} - 2\frac{2}{7}$

c. $1\frac{6}{7} \times \frac{3}{5}$

3. Sand and cement are used in the ratio of 4 : 1 to make concrete.
If 50 kg of cement has been delivered to a building site, how much sand will be needed to make concrete?

4. If $f = (-1)$, $g = 2$ and $h = 5$, evaluate

a. $2fg + 3h$

b. $f^2h - g^3$

c. $4 + h(f - g)$

Starter

1. Multiply out the brackets and simplify

a. $8 + 2(4x - 3) + 2x$

b. $4(3b + 2) - (b + 4)$

2. Bronze is formed by mixing copper, tin and zinc in the ratio 95 : 4 : 1 by mass.

Find the mass of each metal in 2 kg of bronze.

3. Solve the following

a. $8x + 1 = 4 + 5x$

b. $16 - 2x = 10 - 5x$

c. $x - 1 = 6x + 2$

4. Mrs MacDonald's eldest daughter is $3\frac{3}{8}$ feet tall.

Her youngest is $1\frac{5}{16}$ feet.

How much shorter is her youngest daughter compared to her eldest?

Starter

1. Find the following

a. 24% of 45 kg

b. $\frac{3}{7} \times 1078$

2. Fully factorise the following

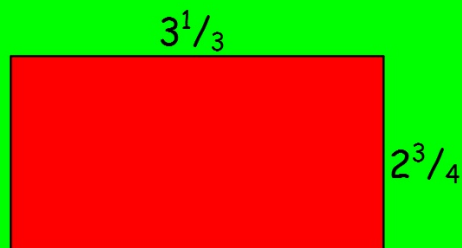
a. $6vw^2 - 18vw$

b. $27ab^2c^3 + 36ab$

c. $14x^2yz^2 - 7x^3y^4z + 70xy^2z$

3. Three boys on a football tour to Austria have £50, £70, and £80 pocket money which they change into a total of 1140 Euros. How should this be divided up amongst them?

4. Find the area and perimeter of this rectangle:



Starter

- Multiply out the brackets and simplify
 - $6(x + 5) - 4(2x - 1)$
 - $18 - 2k(k + 5)$
- A new cooker costs £289 plus VAT at 17.5%.
Find the total cost.
- If $a = 11$, $b = 3$, $c = (-2)$, evaluate the following expressions
 - $a^2 - bc$
 - $ac^2 + b^3$
 - $a - (b - c)^2$
- On average, four cars out of every ten fail their MOT test.
During one week at a particular garage, 65 cars were tested.
How many were expected to fail?