

Starter

1. Calculate

a. $2^5/26 \times 2/5$

b. $4/7 - 3/5 \times 1/3$

c. $6^2/3 \div 4^1/6$

2. Factorise:

a. $12g - 3g^2$

b. $12f^7g^5h^4 - 4f^4gh + 16f^7h$

3. Find the gradient and the y-intercept of each line.

a. $9x - 3y = 12$

b. $5x - 4y - 9 = 0$

c. $3y - x = 18$

4. Find the compound interest earned on £4,650 when it is invested in a high-yield bond for 7 years with an interest rate of 4.55% p.a.

Starter

1. Solve

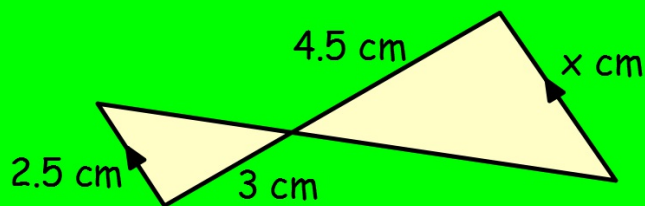
a. $4(3p - 5) = 5$

b. $5(2w - 3) - 2(3w + 3) = 18$

2. A straight line passes through the points (0, 3) and (4, -1).
Find the equation of this line.

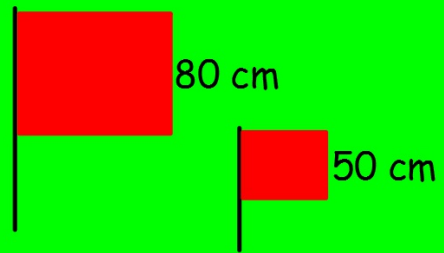
3. Sarah, Jack and Amy go to M & D's theme park. They decide to share a large drink. Sarah drinks $\frac{4}{7}$ of the drink and Amy has $\frac{1}{5}$.
What fraction is left for Jack?

4. Find x.



Starter

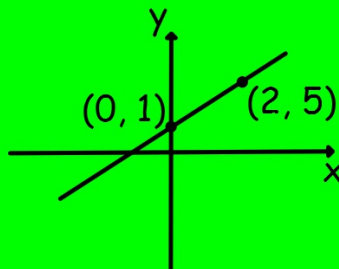
- Round the following to 3 s.f.
 - 570701
 - 8.9428
 - 0.0003996
- Special promotional packs of skittles offer "30% extra free". In a promotional pack there are an average of 203 skittles. What is the average number of skittles in a standard bag?
- A straight line which passes through the point (0, -1) is parallel to the line with equation $6x - 5y + 3 = 0$. Find the equation of this line.
- Two flags are mathematically similar. The larger flag has an area of 7680cm^2 . Find the area of the smaller flag.



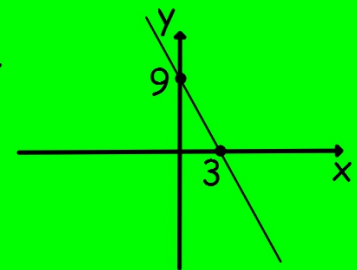
Starter

1. Find the equation of each line below.

a.



b.



2. Evaluate the following where $j = 2$, $k = -4$ and $m = 3$,

a. $2j - m^2$

b. $j^2m - k$

c. $(2m + 2k)^2$

3. Find the area of:

a. A quarter circle with radius 3cm

b. A semi-circle with diameter 8cm

4. An aeroplane flies a distance of 2310 miles at an average speed of 420 miles per hour.

Calculate how long, in hours and minutes, the journey will take.

Starter

1. Solve

a. $8(x - 2) - 3x + 4 = 2(x + 7)$

b. $4x^2 - 2x(2x - 10) = 12$

2. Find where the following lines cross the y-axis:

a. $7y - 2x = 1$

b. $8x - 3y - 2 = 0$

3. Winnie sets off from Glasgow and travels at an average speed of 90 km per hour until she arrives in Edinburgh which is 40 miles away.

How long did the journey take?

4. A Halloween decoration is in the shape of a circle. Calculate the radius of the decoration if it has an area of 423cm^2 .

Starter

1. Solve

a. $8(x - 2) - 3x + 4 = 2(x + 7)$

b. $4x^2 - 2x(2x - 10) = 12$

2. Find where the following lines cross the y-axis:

a. $7y - 2x = 1$

b. $8x - 3y - 2 = 0$

3. Winnie sets off on her broomstick from *Glasgow* at 1525 and travels at an average speed of 90 km per hour arriving at her destination at 1955.

How far has she travelled?

4. A Halloween decoration is in the shape of a circle.

Calculate the diameter of the decoration if it has an area of 423cm^2 .