

Starter

1. Multiply the brackets and simplify

a. $4(e - 5) + 3(e + 6)$

b. $4(2r - 1) - (3r - 6) + 27$

2. Find the equation of the line joining the points

a. $(0, -2)$ and $(3, 7)$

b. $(-5, -2)$ and $(0, -7)$

3. The carbohydrate content of potatoes decreases at a rate of 2.7% per week.

If a potato originally has 26g of carbohydrate, how much would it have after 3 weeks?

4. Find the area of a quarter circle with radius 6 cm.

Starter

1. Multiply the brackets and simplify

a. $3(e - 2) + 3(e + 7)$

b. $3(2r - 1) - 2(4r - 1) + 6r$

2. There are 1380 dogs in a shelter. If the number of dogs increases by 13% per year, how many dogs will be present 12 years later?

3. Find the gradient of the line joining the points

a. $(-1, 4)$ and $(5, 2)$

b. $(-3, -7)$ and $(6, -2)$

4. Find the

a. area of a semi-circle with radius = 25 cm.

b. perimeter of a quarter circle with radius = 8 cm.

Starter

1. Calculate

a. $\frac{3}{5} + \frac{1}{3}$

b. $2\frac{2}{5} - \frac{5}{6}$

c. $\frac{4}{5} \div \frac{8}{15}$

2. Multiply out the brackets and simplify

a. $5(2y - 1) + 3(7 - 4y)$

b. $2m(m - 7) - 4(6m - 2m^2)$

3. Find the gradient of the line joining the points

a. (3, 7) and (-1, -1)

b. (0, -9) and (2, -2)

4. A farmer takes 9 days to harvest her corn using 2 combine harvesters. How long would it take if she could use 3 combines?

Starter

1. Calculate

a. $\frac{2}{3} + \frac{5}{7}$

b. $3\frac{1}{2} - \frac{4}{9}$

c. $\frac{8}{11} \div \frac{16}{33}$

2. Find the gradient of the line joining the points

a. (4, -2) and (5, 9)

b. (-3, -8) and (0, -5)

3. Find the area of a sector which has an angle of 48° and a radius of 16 cm (1 d.p.).

4. A watermelon dries out and as a consequence its volume decreases from 5000cm^3 to 4730cm^3 over the course of one day.

a. Express the reduction in volume as a percentage of its original size.

b. If the watermelon continues to shrink at the same rate, what will be its volume in a further three days?

Starter

- Find the gradient of the line joining the points
 - $(3, 8)$ and $(5, 0)$
 - $(-8, 5)$ and $(6, 1)$
- Find the area of a sector which has an angle of 125° and a radius of 11 cm (2 s.f.).
- A house is valued at £167,000.
It appreciates at a rate of 3.72% p.a. for 6 years.
Find the new value of the house correct to 2 decimal places.
- Solve
 - $4(x - 5) = 3(x + 2)$
 - $5(3x - 9) = 4(2x - 6)$