

Starter

1. Round the following to 2 s.f.

a. 572394

b. 1.793

c. 0.009099

2. Factorise fully

a. $16x^2 - 32xy^2$

b. $32a^2bc^3 - 24ab^2c^2 + 48a^3bc$

3. Write the following numbers in standard form

a. 45900

b. 0.00053

c. 1008000

4. As a salesman, Phil earns £350 per week plus 15% commission on all sales.

Calculate his income (before tax) in a week when his sales are £1235.

Starter

1. Write the following in number form

a. 3.6×10^{-3}

b. 8.21×10^4

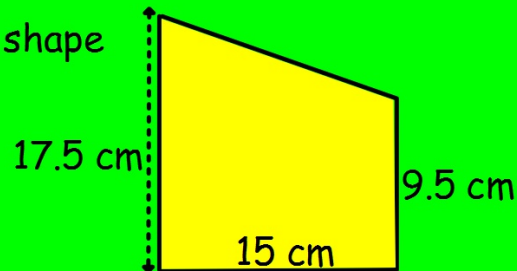
c. 2.09×10^{-6}

2. Solve

a. $7(1 + 5b) = -14$

b. $3(2w - 2) + 5 = 9 - 2(3w + 1)$

3. Calculate the area of this shape



4. Steven earns £8.50 per hour. Calculate his weekly earnings (before tax) if he works a 36 hour week plus 5 hours of overtime at double time.

Starter

1. Convert the following

a. 893 cm to m

b. 6.07 km to m

c. 1.9 m to mm

2. Paul's annual phone bill is currently £993 minus a 30% discount for his continued loyalty. A rival company quotes him a yearly price of £585. Is this new quote cheaper than his existing contract?

3. If $g = 10$, $h = 12$ and $i = (-2)$, find

a. $gh - 10i$

b. $(g - h)^2 - i^2$

c. $5g^2 \div i$

4. The owner of a cafe buys 15 full crates and 4 loose cans of a particular brand of soft drink. He puts 124 cans on the shelf and has 9 full crates left.

By creating an equation, find the number of cans in each crate.

Starter

1. Round the following to 2 d.p.

a. 25.6145

b. 0.686

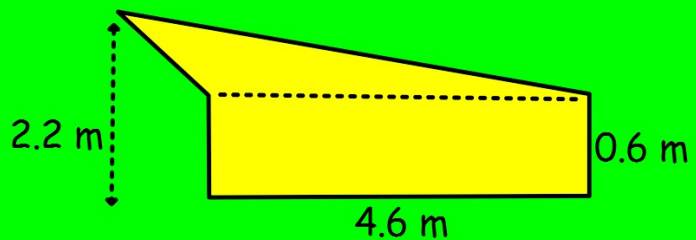
c. 3.998

2. Solve the following

a. $2(x - 6) + 7 = 17$

b. $4(y - 4) = 2(y + 25) - 4$

3. Find the area of this shape



4. Robertson's advertise that their crisps contain less than 6% fat. When a 25 g bag is tested, it is found to contain 1.67 g of fat. Does this bag meet the manufacturer's claim? Give a reason for your answer.

Starter

1. Calculate

a. $\frac{7}{8} - \frac{5}{24}$

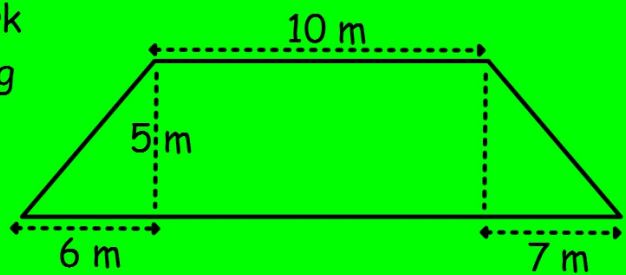
b. $2\frac{3}{7} \times 1\frac{5}{9}$

c. $14 \div 3\frac{1}{3}$

2. A children's play park has the shape opposite:

a. Find the surface area of the park

b. Calculate the cost of resurfacing the park if the special surface costs £45 per square metre.



3. The ratio of land to water on the surface of the Earth is approximately 3:7. If the surface area of the Earth is 5.1×10^8 square kilometres, how much of the Earth is water?
Answer in scientific notation.