

Starter

1. Fully factorise

a. $7ij + 42i^4j^2$

b. $25x^3y + 15x^2y^6 - 60xy^7$

2. A hardware shop sells lengths of heavy duty chain.

1 metre of chain weighs $4\frac{4}{5}$ kg.

What will the weight of a $3\frac{1}{4}$ metre chain be?

3. Find the range, mode and median of the following data set:

108, 116, 148, 137, 135, 142, 129, 138, 148, 115, 148

4. A painting was bought for £500 and then valued 5 years later.

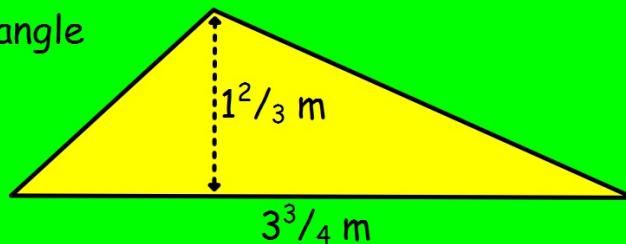
It was now worth £2500.

Calculate the percentage appreciation.

Starter

- Convert the following measurements to cm
 - 2.65 m
 - 6890 mm
 - 3.01 km
- If $x = (-5)$, $y = 3$, $z = (-1)$, evaluate
 - $x^2z - 2y^2$
 - $(x - y)^3 + 2z$

- Find the area of this triangle



- A gold necklace bought 3 years earlier sold at auction for £5850. During this time, it had appreciated in value by 20%. What must it have originally cost?

Starter

1. Round to 3 s.f.

a. 57608

b. 0.0032567

c. 9999

2. Fully factorise

a. $45p^3 - 9p^2$

b. $15x^2y + 5xy^2 - 30x^3y^4$

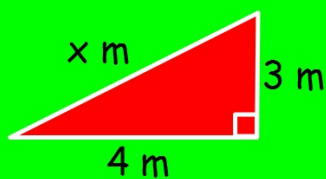
3. A $4\frac{1}{2}$ metre length of plank weighs $10\frac{1}{8}$ kg.

a. what does 1 metre of the plank weigh?

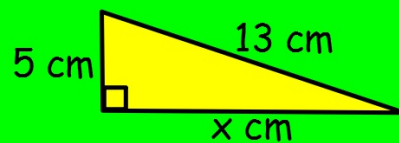
b. what is the weight of a $3\frac{1}{4}$ m plank of the same type of wood?

4. Find the length of x

a.



b.



Starter

1. Find the volume of a cuboid measuring 60 cm by 40 cm by 8 cm (in L).
2. Solve the following
 - a. $6(x - 5) = 2(2x + 1)$
 - b. $11 - 3(y + 2) - 4(y - 1) = 1$
3. George borrows £400 from a loan company.
They charge him 25% interest in the first month, 30% in the second month, and 35% in the third month.
How much money will George owe after 3 months?
4. Joanne runs $1\frac{3}{4}$ miles on Monday, $2\frac{1}{3}$ miles on Wednesday, and 3.5 miles on Friday.
 - a. How far has she run this week?
 - b. How far short of her 10 mile target is she?

Starter

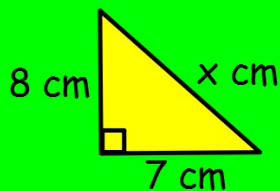
1. Fully factorise

a. $4p^2q - 18pq^2$

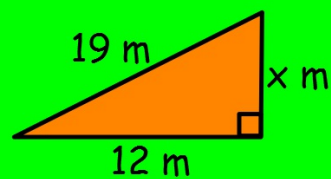
b. $27x^3y^5z + 9x^2yz^4 - 3xy$

2. Find the length of x (1 d.p.)

a.



b.



3. When David sold his flat he lost 3% of what he originally paid for it. He got £43650 for the flat.

What must he have paid for the flat when he bought it?

4. The volume of a cuboid is 7 m^3 . Find the height of the cuboid if the length = $1\frac{4}{5} \text{ m}$ and the breadth = $2\frac{1}{3} \text{ m}$.