

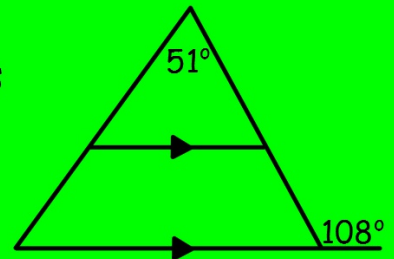
Starter

1. Solve the following

a. $3(2x + 1) + x = 5x + 11$

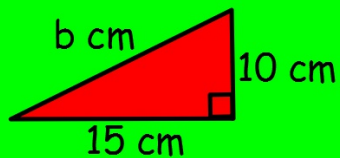
b. $8(2x - 2) = 3(4x + 4)$

2. Copy the diagram and fill in the missing angles

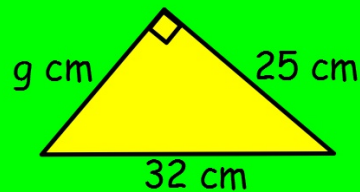


3. Find the missing side in each of these triangles

a.



b.



4. Following an incident at the BBC, an ex-television presenter saw his number of followers on Twitter fall from 1,250,000 to 800,000. Express this decrease as a percentage of the original number.

Starter

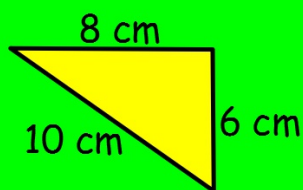
1. Solve

a. $2(2x - 3) = x + 9$

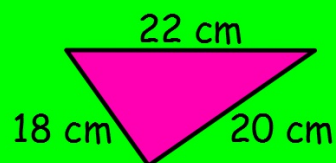
b. $3(4x + 1) - 3(5x - 2) = 0$

2. Are either of these right-angled triangles?

a.

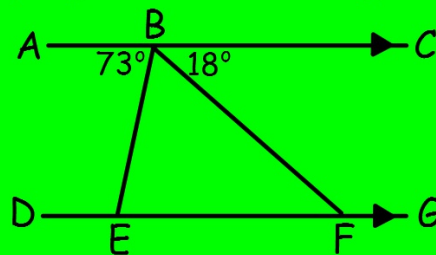


b.



3. The number of people watching the solar eclipse in Scotland increased by 3% every minute. If there were 400,000 people watching it at 9.25 am, how many people were watching it by 9.30 am?

4. Find the sizes of
(i) angle BEF
(ii) angle FBA



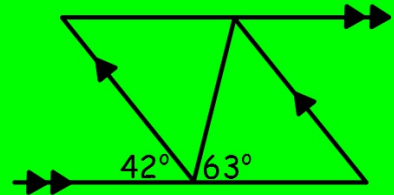
Starter

1. Fully factorise

a. $6jk - 16k^3$

b. $14ab^2c + 28a^3bc^2 - 35a^3bc$

2. Copy the diagram and fill in the missing angles



3. A 5 m long ladder rests against a wall so that the foot of the ladder is 1.7 m from the bottom of the wall. How far up the wall does it reach?

4. Over the course of a week, a toy shop recorded the number of each type of One Direction doll it sold.

(i) Liam (6)

(ii) Niall (18)

(iii) Harry (25)

(iv) Louis (11)

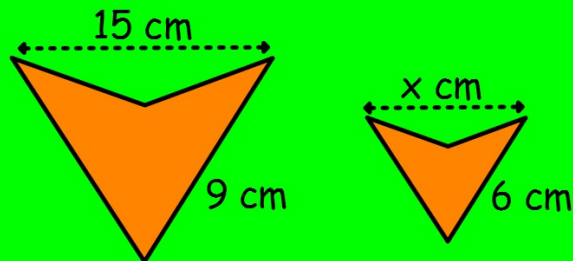
a. Find the angles required to create a pie chart.

b. The following week, the shop sold 180 One Direction dolls in the same ratio. How many of these were Louis dolls?

Starter

1. If $f = 2$, $g = 7$ and $h = (-1)$, evaluate
a. $3fh - g$ b. $f - g + h^3$

2. These shapes are mathematically similar.
Find x .



3. Following an unexpectedly warm day, a corner shop was left with only 12% of its ice lollies in the freezer.
If there were 6 lollies left, how many were there originally?
4. A window frame measures 1.75 m by 1.9 m.
Its diagonal measures 2.4 m.
Is the frame rectangular?

Starter

- Express as a product of prime factors
 - 30
 - 525
- Factorise, fully
 - $81g^2 - 36gh^3$
 - $14p^2q - 16p^3qr + 8pq^3$
- Ryan has set himself a target to run 15 miles every week. He runs $2\frac{3}{4}$ miles on Monday, $3\frac{1}{3}$ miles on Wednesday, and $5\frac{1}{2}$ miles on Friday. How far does he have to run at the weekend in order to meet his target?
- A cuboid-shaped room has a volume of 124 m^3 . If it is 9.2 m long and 4.2 m wide, find its height.