

Starter

1. Round the following to 2 s.f.

a. 0.6847

b. 507952

c. 8.9834

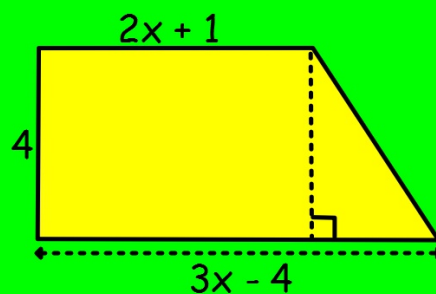
2. Fully factorise

a. $6xy + 18x^2$

b. $9a^3b + 15a^2b^3 - 27a^2b$

3. a. Find an expression for the area of this shape.

b. If the area is 54 cm^2 , find x .

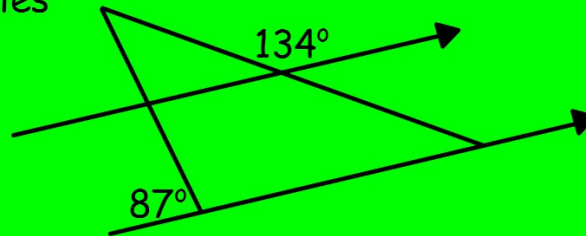


4. List the 5-figure summary for this data set:

34, 56, 73, 29, 27, 30, 51, 48, 45

Starter

1. Fill in the missing angles



2. Solve

a. $5(2x + 3) = 6(x - 4)$

b. $10 - 3(g - 5) + 2(g - 4) = 0$

3. A summer fruit punch was made up of $\frac{1}{3}$ orange juice, $\frac{2}{7}$ strawberry juice, $\frac{1}{6}$ apple juice and the remainder pineapple juice.
- What fraction of the drink was pineapple juice?
 - How much strawberry juice was needed to make 3.5 L of punch?
4. During winter, the number of cases of flu increased by 3.5% every day. If there were 2000 recorded cases at the beginning of one week, how many were there at the end of that week?

Starter

1. The value of a flat in 2012 was £50,000.
By 2015 the value had risen to £87,000.
What was the percentage appreciation?
2. Here is a list of charity donations (in pounds)
2, 1, 5, 1, 2, 1, 1, 10, 1, 1, 5, 20, 400, 20, 5, 1, 1, 10, 2, 5
 - a. Find the mean and median amounts
 - b. A donor was selected at random and asked about her donation.
Was her donation likely to have been above or below the mean?
3. Calculate the length of the side of a square with diagonal 14 cm.

Starter

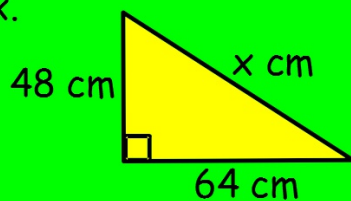
1. Express as a product of prime factors

a. 56

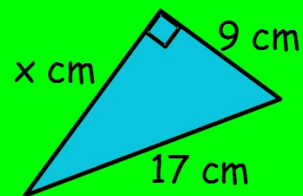
b. 280

2. Find x .

a.

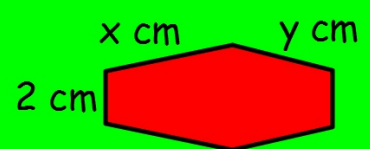
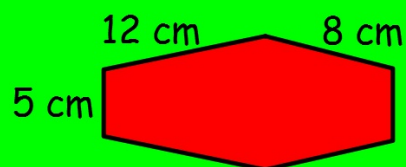


b.



3. These shapes are mathematically similar.

Find the missing sides.



4. Calculate the angles required to draw a pie chart:

a. White (6)

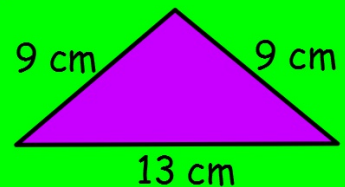
b. Red (31)

c. Blue (34)

d. Black (11)

Starter

1. Alex claims this isosceles triangle is right-angled.
Is he correct?



2. For the following discus throws (in metres),
find the interquartile range:

61.0, 50.5, 40.9, 29.1, 65.1, 56.3, 49.5, 39.3, 64.8

3. In a recent election Labour won 26,451 votes, Conservative won 22,675 votes and SNP won 18,290 votes.
If 75% of those eligible to vote did so, what was the total number of eligible voters?