Ratio and Proportion

Calculating ratio

There are 24 goals scored during a match. For every 3 goals scored by the home team, there is 1 goal scored by the away team. Use the bar model to help you calculate:

How many home goals altogether? ▢

How many away goals altogether? ▢

There are 36 marbles in a bag. For every 2 large marbles, there are 4 small marbles. Use the bar model to help you calculate:

How many large marbles altogether? ▢

How many small marbles altogether? ▢

What is the simplified ratio of crisps to chocolate to sweets?

There are 4 bags of crisps for every 8 chocolates and 2 sweets.

▢ : ▢ : ▢

Use the ratio to calculate how many treats there will be altogether if there are 12 bags of crisps.

▢ chocolates

▢ sweets

▢ treats altogether

What is the simplified ratio of red to white to blue bricks?

There are 6 red bricks for every 36 white and 18 blue bricks.

▢ : ▢ : ▢

Use the ratio to calculate how many bricks there will be altogether if there are 18 red bricks.

▢ blue bricks

▢ white bricks

▢ bricks altogether

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Write a statement to describe the ratio of 1:3:4 shown below.

Write a statement to describe the ratio of 4:1:3 shown below.

For every...

For every...

For every 12 geese on a farm, there are 6 sheep and 4 goats. There are 44 animals on the farm altogether.

One third of the geese go missing one morning.

What is the new simplified ratio of geese to sheep and goats?

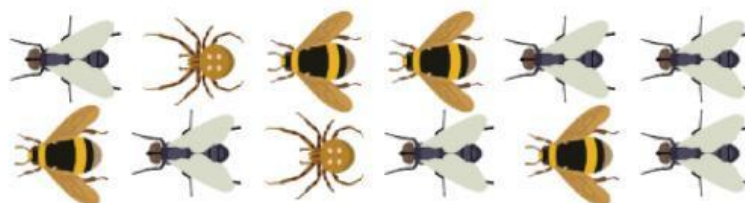What is the new total number of animals?

For every 2 three year old boys at nursery, there are 4 two year old boys and 2 four year old boys. There are 24 boys altogether.

The number of two year old boys increases by half.

What is the new simplified ratio of 3, 2 and 4 year old boys?

What is the new total number of boys?

Tick the correct statements about the representation below.

A. For every 2 bees, there are 3 flies and 2 spiders. ☐

B. If there are 5 spiders, there will be 10 bees and 15 flies. ☐

C. If there are 6 bees, there will be 18 insects in total. ☐

D. If there are 36 insects in total, 10 of them will be bees. ☐

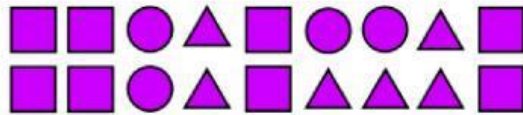Sally is following a recipe to make some homemade soup for a party.

The ratio of potatoes to leeks to onions is 5 : 2 : 3 to make 1.25kg.

She wants to make 3.75kg of soup.

She says, "I will need to buy 17 potatoes and 6 leeks to make enough soup."

Is she correct? Explain why.

Look at the set of objects below and complete the statements, using the ratio in its simplest form.

■ ■ ● ▲ ■ ● ● ▲ ■
■ ■ ● ▲ ■ ▲ ▲ ▲ ■

A. For every _____ squares, there are _____ circles and _____ triangles.

B. The ratio of squares to triangles is

C. The ratio of circles to squares is

D. The ratio of squares to circles to triangles is