

Changing ratios



- 1) Simon has a jar of sweets.

The ratio of the number of cola-flavoured sweets to the number of orange-flavoured sweets in the jar is $2 : 3$.

Simon eats 3 of the cola-flavoured sweets.

The ratio of the number of cola-flavoured sweets to the number of orange flavoured sweets in the jar is now $7 : 12$.

Work out the total number of sweets that were originally in the jar.

$$24 + 36 = 60$$

- 2) Javier and Carmen share some money in the ratio $5 : 6$. When each are given £4 more, the ratio of the money they have is now $6 : 7$. How much money did each initially have? _____

$$20 : 24$$

- 3) The ratio of boys to girls is $1 : 2$. Two boys and two girls enter the room and the ratio is now $5 : 9$. How many boys and girls were there originally?

8 boys and 16 girls

- 4) The ratio of children to adults on a school trip is initially $10 : 1$. This doesn't meet government regulations, so 5 more children and 5 more adults join the trip so that the ratio is now $9 : 1$. How many children are there now?

$$405$$

- 5) My fruit basket contains apples and oranges. The ratio of apples to oranges in the basket is $3 : 8$. When I remove one apple the ratio changes to $1 : 3$. How many oranges are in the basket?

$$24$$

- 6) The ratio of the number of boys to girls at a party is $3 : 4$. Six boys leave the party. The ratio of the number of boys to girls at the party is now $5 : 8$. Work out the number of girls at the party.

48 girls

7) The ratio of the number of adults to children visiting the zoo is 8 : 13.
A family of 2 adults and 3 children leave.
A family of 1 adult and 2 children enter.
The ratio of adults to children is now 7 : 11.

How many adults and children were there initially?

**48 adults and
78 children**

Super challenge

The prices of two phones are in the ratio $x : y$.

When the prices are both increased by £20, the ratio becomes 5 : 2.

When the prices are both reduced by £5, the ratio becomes 5 : 1.

Express the ratio $x : y$ in its lowest terms.

4:1