

Name:

Ratios

Question 1

When making an apple pie, 4 kilograms of apples are used in 1 pie.
How much apple is used to make 6 pies?

Question 2

A scale on a map is 1 centimeter equals 5 kilometers.
How far are two towns apart if the map shows them as 7 centimeters apart?

Question 3

A scale on a map is 1 centimeter equals 5 kilometers.
If two towns are 50 kilometers apart, how far will it be on the map?

Question 4

In a mixed basketball team there is a ratio of 3 boys for every 2 girls.
How many boys are there if there are 6 girls?

Question 5

When making a type of candy, there is a ratio of 3 kilograms of chocolate to 5 kilograms of fruit.
If there was 12 kilograms of chocolate, how much fruit was used?

Question 6

Jim found out that for every girl at school that liked broccoli, there were 3 girls that didn't like it.
If a total of 300 girls didn't like broccoli, how many did like it?

Question 7

The ratio of male to female birds in a bird cage was 5:3.
For every 20 males how many females are there?

Question 8

In the school election, for every 15 votes Randy got, Suzie got 7 votes.
What is the ratio of votes for Suzie to votes for Randy?

Question 9

At a carwash they use 1 Liter of detergent for every 4 cars.
How many cars can they wash with 20 Liters of detergent?

Question 10

The ratio of hotdogs sold to hamburgers sold was 10:7.
If 120 hotdogs were sold, how many hamburgers were sold?

Ratios solutions

Question 1

When making an apple pie, 4 kilograms of apples are used in 1 pie.
How much apple is used to make 6 pies?

Solution

To calculate the amount of apple used to make 6 pies, use the ratio of 1:4. This means one apple pie uses 4kg of apples. For 6 pies it is 6:24. 6 pies would use **24kg** of apples.

Question 2

A scale on a map is 1 centimeter equals 5 kilometers.
How far are two towns apart if the map shows them as 7 centimeters apart?

Solution

To calculate how far apart the two towns are apart, use the ratio of 1:5. 1 centimeter equals 5 kilometers. 7cm on the map equals 7×5 km. The towns are **35km** apart.

Question 3

A scale on a map is 1 centimeter equals 5 kilometers.
If two towns are 50 kilometers apart, how far will it be on the map?

Solution

To calculate the distance apart on the map, use the ratio of 1:5 which is equal to 10:50. 10cm is equal to 50km. That means they are **10cm** apart on the map.

Question 4

In a mixed basketball team there is a ratio of 3 boys for every 2 girls.
How many boys are there if there are 6 girls?

Solution

To calculate the number of boys if there are 6 girls, the ratio of boys to girls is 3:2. That means for every 2 girls there will be 3 boys. If there are 6 girls, there will be **9 boys**.

Question 5

When making a type of candy, there is a ratio of 3 kilograms of chocolate to 5 kilograms of fruit.
If there was 12 kilograms of chocolate, how much fruit was used?

Solution

To calculate the amount of fruit, use the ratio of chocolate to fruit which is 3:5. If 12kg of chocolate was used then that is 4 times the amount of chocolate which means there was 4 times the amount of fruit used. The ratios are $3:5 = 12:20$. **20kg** of fruit was used.

Question 6

Jim found out that for every girl at school that liked broccoli, there were 3 girls that didn't like it.
If a total of 300 girls didn't like broccoli, how many did like it?

Solution

To calculate the number of girls that do like broccoli, use the ratio of 3:1. That means for every 3 girls that didn't like broccoli, 1 girl did like it. For 300 girls, it is 300:100. This is 300:100. Therefore **100 girls** liked broccoli.

Question 7

The ratio of male to female birds in a bird cage was 5:3.
For every 20 males how many females are there?

Solution

To calculate the number of female birds, use the ratio of 5:3. For every 5 male birds there are 3 females. If there are 20 males then there would be **12 females**. 20:12.

Question 8

In the school election, for every 15 votes Randy got, Suzie got 7 votes.
What is the ratio of votes for Suzie to votes for Randy?

Solution

To calculate the ratio of votes for Suzie to Randy, it is 7 votes to 15 votes. That is a ratio of **7:15**

Question 9

At a carwash they use 1 liter of detergent for every 4 cars.
How many cars can they wash with 20L of detergent?

Solution

To calculate the number of cars that can be washed with 20L of detergent, use the ratio of 1:4. That is 20 times the amount of detergent which means they can wash 20 times the number of cars. For 20L they could wash **80 cars**.

Question 10

The ratio of hotdogs sold to hamburgers sold was 10:7.
If 120 hotdogs were sold, how many hamburgers were sold?

Solution

To calculate the number of hamburgers sold, use the ratio of 10:7. That means for every 10 hotdogs that were sold, there were 7 hamburgers sold. 120 hotdogs means 84 hamburgers were sold. 120:84 **84** hamburgers were sold.