Solving Ratio Problems

I can solve ratio problems.

Solve these ratio problems, showing your working out.

1. In a fruit bowl, there are 2 oranges for every 3 apples. If there are 15 apples, how many oranges are there?

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2. Rupra is picking strawberries. For every 5 strawberries she puts in her basket, she eats 2. If she picks 28 strawberries, how many does she eat and how many does she put in the basket?

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3. A bag of sweets contains red sweets and yellow sweets. The ratio of red to yellow is 3:7. If there are 40 sweets altogether, how many yellow sweets are there?

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4. Jack has 30 sweets. He shares his sweets with his friend. When he gives his friend a sweet, he has 2 for himself. How many sweets do they each have?

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5. In a field, there are some sheep and some goats. The ratio of sheep to goats is 3:1. If there are 3 goats, how many sheep are there?

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6. Lucy has a necklace which has red beads and blue beads. For every red bead, there are four blue beads. There are 20 beads in total. How many of these are blue?

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7. In the school choir, there are 30 children. The ratio of girls to boys is 4:1. How many boys are in the choir?

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8. Tasneem brings some sweets to school on her birthday. In the bag, there are chocolates and toffees. The ratio of chocolates to toffees is 5:3. If there are 40 sweets, how many are chocolates?

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Solving Ratio Problems

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Solve these ratio problems, showing your working out.

1. Ali has invited 12 friends round for supper. He is cooking curry and rice. He needs 150g of uncooked rice per person. How many grams of rice does he need? Don't forget - Ali will be eating too!

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2. Steffi is painting her house. She has calculated she needs 40 litres of paint in total. She has decided to mix pink paint. She will need 3 litres of white for every 2 litres of red. How many litres of each colour will she need to buy?

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3. In a pack of balloons, there are 3 different colours: red, blue and green. The ratio is 5:2:1 (red: blue: green). If there are 8 blue balloons in the pack, how many balloons are there in total?

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4. Susie is saving for a new pair of trainers. Every week, she saves £5 of her pocket money and her mum gives her £3. If the trainers cost £56, how many weeks will it take her to have enough money to buy them? How much money will she have saved and how much will her mum have given?

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5. At a party, there are three sorts of drinks: orange, lemonade and cherry. The ratio of the drinks is 3:2:1 (orange:lemonade:cherry). If there are 12 glasses of orange, how many glasses of drink are there altogether?

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6. Class 6 do a survey to find out which sport children like best. For every child who said they like rounders, there were three children who liked football and two who said they like swimming best. There were 20 children who said they liked swimming. How many children took part in the survey?

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7. A printing press prints 120 sheets in 3 minutes. How many sheets are printed in 30 minutes?

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8. Farmer Giles and Farmer Jones have chickens. Farmer Giles' chickens lay 2 brown eggs for every 5 white eggs. Farmer Jones' chickens lay 3 brown eggs for every 4 white eggs. On Monday, Farmer Giles' chickens laid 35 eggs and Farmer Jones' chickens laid 28 eggs. Which farmer's chickens laid more brown eggs?

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Solving Ratio Problems

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Solve these ratio problems, showing your working out.

1. A rectangle has the ratio of width to length 2:3. If the perimeter of the rectangle is 30cm, what's the area?

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2. A piece of wood 3.6m long is cut into 3 pieces in the ratio 2:3:4. Find the length of each piece.

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3. Here are the ingredients needed to make a smoothie for 4 people:

   240ml cranberry juice, 180g raspberries, 120ml milk, 300ml natural yoghurt, 2 tbsp sugar.

   a. How much cranberry juice would be needed to make the smoothie for 8 people?

   b. How much milk would be needed for 2 people?

   c. Write the ingredient list for 10 people.

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4. Here are the ingredients for a chocolate cake which serves 10:

   220g self-raising flour, 350g caster sugar, 85g cocoa powder, 2 eggs, 250ml milk, 120ml vegetable oil, 250ml boiling water

   a. How much caster sugar would be in each slice?

   b. If you wanted to make enough cake for 15 slices, how much flour would be needed?

   c. Write the ingredient list for 18 people.

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Solving Ratio Problems - **Answers**

1.	In a fruit bowl, there are 2 oranges for every 3 apples. If there are 15 apples, how many oranges are there?
	10 oranges
2.	Rupra is picking strawberries. For every 5 strawberries she puts in her basket, she eats 2. If she picks 28 strawberries, how many does she eat and how many does she put in the basket?
	She eats 8 and puts 20 in the basket.
3.	A bag of sweets contains red sweets and yellow sweets. The ratio of red to yellow is 3:7. If there are 40 sweets altogether, how many yellow sweets are there?
	28 yellow sweets
4.	Jack has 30 sweets. He shares his sweets with his friend. When he gives his friend a sweet, he has 2 for himself. How many sweets do they each have?
	Jack has 20 sweets and his friend has 10 sweets.
5.	In a field, there are some sheep and some goats. The ratio of sheep to goats is 3:1. If there are 3 goats, how many sheep are there?
	9 sheep
6.	Lucy has a necklace which has red beads and blue beads. For every red bead, there are four blue beads. There are 20 beads in total. How many of these are blue?
	16 blue beads
7.	In the school choir, there are 30 children. The ratio of girls to boys is 4:1. How many boys are in the choir?
	6 boys
8.	Tasneem brings some sweets to school on her birthday. In the bag, there are chocolates and toffees. The ratio of chocolates to toffees is 5:3. If there are 40 sweets, how many are chocolates?
	25 chocolates

Solving Ratio Problems - **Answers**

1.	Ali has invited 12 friends round for supper. He is cooking curry and rice. He needs 150g of uncooked rice per person. How many grams of rice does he need? Don't forget - Ali will be eating too!
	1950g of rice
2.	Steffi is painting her house. She has calculated she needs 40 litres of paint in total. She has decided to mix pink paint. She will need 3 litres of white for every 2 litres of red. How many litres of each colour will she need to buy?
	24 litres of white and 16 litres of red
3.	In a pack of balloons, there are 3 different colours: red, blue and green. The ratio is 5:2:1 (red: blue: green). If there are 8 blue balloons in the pack, how many balloons are there in total?
	32 balloons
4.	Susie is saving for a new pair of trainers. Every week, she saves £5 of her pocket money and her mum gives her £3. If the trainers cost £56, how many weeks will it take her to have enough money to buy them? How much money will she have saved and how much will her mum have given?
	7 weeks. She saved £35 and mum gave £21.
5.	At a party, there are three sorts of drinks: orange, lemonade and cherry. The ratio of the drinks is 3:2:1 (orange: lemonade:cherry). If there are 12 glasses of orange, how many glasses of drink are there altogether?
	24 glasses
6.	Class 6 do a survey to find out which sport children like best. For every child who said they like rounders, there were three children who liked football and two who said they like swimming best. There were 20 children who said they liked swimming. How many children took part in the survey?
	60 children
7.	A printing press prints 120 sheets in 3 minutes. How many sheets are printed in 30 minutes?
	1200 sheets
8.	Farmer Giles and Farmer Jones have chickens. Farmer Giles' chickens lay 2 brown eggs for every 5 white eggs. Farmer Jones' chickens lay 3 brown eggs for every 4 white eggs. On Monday, Farmer Giles' chickens laid 35 eggs and Farmer Jones' chickens laid 28 eggs. Which farmer's chickens laid more brown eggs?
	Farmer Jones' chickens

Solving Ratio Problems - **Answers**

1.	A rectangle has the ratio of width to length 2:3. If the perimeter of the rectangle is 30cm, what's the area?
	54cm²
2.	A piece of wood 3.6m long is cut into 3 pieces in the ratio 2:3:4. Find the length of each piece.
	0.8m 1.2m 1.6m
3.	Here are the ingredients needed to make a smoothie for four people: 240ml cranberry juice, 180g raspberries, 120ml milk, 300ml natural yoghurt, 2 tbsp sugar. a. How much cranberry juice would be needed to make the smoothie for eight people? b. How much milk would be needed for two people? c. Write the ingredient list for 10 people.
a.	**480 ml**
b.	**60ml**
c.	**600ml cranberry juice, 450g raspberries, 300ml milk, 750ml natural yoghurt, 5 tbsp sugar**
4.	Here are the ingredients for a chocolate cake which serves 10: 220g self-raising flour, 350g caster sugar, 85g cocoa powder, 2 eggs, 250ml milk, 120ml vegetable oil, 250ml boiling water. a. How much caster sugar would be in each slice? b. If you wanted to make enough cake for 15 slices, how much flour would be needed? c. Write the ingredient list for 18 people.
a.	**35g**
b.	**330g**
c.	**396g self-raising flour, 630g caster sugar, 153g cocoa powder, 4 medium-sized eggs, 450ml milk, 216ml vegetable oil, 450ml boiling water.**