104. Understanding Ratios and Using Cross Multiplication

Practice Questions

1. The ratio of x to y is 2:3. Write an equation using cross multiplication.
2. The ratio of a to b is 5:7. Write an equation using cross multiplication.
3. A car's fuel efficiency is in the ratio of miles driven to fuel used as 8:3. Write an equation connecting miles driven (m) and fuel used (f).
4. The number of apples to oranges in a basket is 4:5. Write an equation connecting apples (a) and oranges (o).
5. The weight of two objects is in the ratio 7:9. If the first object weighs x kg and the second weighs y kg, write an equation for x and y.
6. A train's speed to a car's speed is 5:3. Write an equation connecting the train's speed (T) and the car's speed (C).
7. The ratio of sugar to flour in a cake recipe is 2:5. Write an equation for the amount of sugar (s) and flour (f) used.
8. The ratio of boys to girls in a class is 3:4. Write an equation connecting the number of boys (b) and the number of girls (g).
9. The time taken for two different routes is in the ratio 5:6. If the first route takes t minutes, write an equation connecting the two times.
10. The ratio of the height of two buildings is 9:11. Write an equation connecting the heights of the first building (h_1) and the second building (h_2).

Extra Content for Foundation GCSE

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Scenario Questions

1. In a fruit juice mix, the ratio of apple juice to orange juice is 3:4. If the volume of apple juice used is x litres, write an equation to express the amount of orange juice (y) needed.
2. A company has a ratio of 5 managers to 12 employees. If the number of managers is m, write an equation for the number of employees (e).
3. A school library has books in the ratio of 7 fiction to 9 non-fiction. If the number of fiction books is f, write an equation to find the number of non-fiction books (n).
4. A shop sells pens and pencils in the ratio 2:5. If the number of pens sold is p, write an equation for the number of pencils (q) sold.
5. A builder mixes cement and sand in the ratio 4:7. If the weight of the cement used is c kg, write an equation to express the amount of sand needed (s kg).
6. A bakery makes cakes and pastries in the ratio 3:8. If the number of cakes made is c, write an equation for the number of pastries (p) made.
7. A class has boys and girls in the ratio 2:3. If the number of boys is b, write an equation for the number of girls (g).
8. A farm has cows and sheep in the ratio 5:6. If there are x cows, write an equation to determine the number of sheep (y).
9. A cinema has VIP seats and standard seats in the ratio 3:10. If the number of VIP seats is v, write an equation for the number of standard seats (s).
10. A business has a workforce split in the ratio of 4 full-time staff to 7 part-time staff. If the number of full-time staff is f, write an equation for the number of part-time staff (p).

Extra Content for Foundation GCSE

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Practice Questions

1. $3x = 2y$
2. $7a = 5b$
3. $3m = 8f$
4. $5a = 4o$
5. $9x = 7y$
6. $3T = 5C$
7. $5s = 2f$
8. $4b = 3g$
9. $6t_1 = 5t_2$
10. $11h_1 = 9h_2$

Scenario Questions

1. $4x = 3y$
2. $12m = 5e$
3. $9f = 7n$
4. $5p = 2q$
5. $7c = 4s$
6. $8c = 3p$
7. $3b = 2g$
8. $6x = 5y$
9. $10v = 3s$
10. $7f = 4p$