

SHARP

Mathematical Literacy – Grade 10

Worksheet 2 – Ratio

1. Simplify the following ratios:
 - a) 70: 10
 - b) 45: 50
 - c) 27: 9
 - d) 49: 56
 - e) 27: 12
 - f) 10: 4
 - g) 25: 45
 - h) 39: 13
 - i) 11: 121
 - j) 64: 16

2. John, Suzy and Rosy want to sell their T.V. for R5000. When they bought the T.V. for R6500, John put in R812.50, Suzy put in R2 437.50 and Rosy put in R3 250. How much should each of them get from the sale of their T.V. if they split the money in the same ratio in which they contributed?

3. A certain recipe requires 2 cups of flour and 3 eggs.
 - a) If you wanted to double the recipe, how many cups of flour and how many eggs would you need?
 - b) If you wanted to triple the recipe how many cups of flour and many eggs would you need?
 - c) Would it be possible to halve this recipe? Give a reason for your answer.
 - d) If you had 10 cups of flour and 16 eggs, how many whole cakes could you make?

4. In a class there are 20 girls and 15 boys.
 - a) Give the ratio of boys to girls.
 - b) If the teacher has to buy 105 prizes for her class, how many prizes should she buy for the boys and how many prizes should she buy for the girls?
 - c) If another 10 boys joined the class, what would the new ratio of boys to girls be?

5. The SPCA says that they have 3 cats for every 5 dogs at the center.
 - a) If the center buys 20 bags of dog food, how many bags of cat food should the center purchase?
 - b) If the center has 896 spaces available for the animals, how many cats and how many dogs can the center have?

- c) In a particular week the center takes in 18 cats.
- i) How many dogs did the center take in?
 - ii) What is the total number of cats and dogs the center takes in for that week?
- d) The SPCA center also says that for every 4 dogs adopted from the center, 2 cats are adopted.
- i) Give the simplified ratio of adopted cats to adopted dogs.
 - ii) If 13 cats were adopted in one week, how many dogs were adopted?
6. A certain plant has 7 petals for every 3 leaves on the stem.
- a) If the plant has 14 petals, how many leaves does the stem have?
 - b) If the stem has 21 leaves, how many petals does the flower have?
 - c) If a florist orders 112 flowers with an average of 8 petals per flower, how many leaves will there be?
7. John gets R50 per week for pocket money, while Nonhlanhla gets R60 a week.
- a) Express the ratio of John's pocket money to Nonhlanhla's pocket money in its simplest form.
 - b) If John and Nonhlanhla save all their pocket money for 5 weeks, how much money would they have altogether?
 - c) John and Nonhlanhla decide to buy sweets and sell them at school. If they each put in one week's worth of pocket money, and earn R154, how much should each of them get if they split the money in the same ratio as the amount that they put in?
 - d) John's parents give him an extra R5 every week for his pocket money.
 - i) What is the new ratio of John's pocket money to Nonhlanhla's pocket money?
 - ii) John and Nonhlanhla decide to sell sweets again the following week and earn R161. How much should John and Nonhlanhla get if they split the money in the ratio from question d (i)?
 - iii) What do you notice and why do you think this happens?