

Year 4 Term 4 Homework

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| Student Name: _____ | Grade: _____ |
| Date: _____ | Score: _____ |

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8 Year 4 Term 4 Week 8 Homework

8.1 Problem Solving 1 (Averaging)

Exercise 8.1.1

1. A group of students heights were: Jane 1.12 m, Joe 1.26m, Jenny 0.98m, and Gary 1.24m. What was their average height?

2. A group of students weights were: Jane 45 kg, Joe 48 kg, Jenny 42 kg and Gary 43 kg. What was their average weight?

3. The sum of four consecutive numbers is 66. Find the largest of the four numbers.

4. The average of the four consecutive even numbers is 11. Find the largest of the four numbers.

5. The average of four consecutive odd numbers is 14. Find the smallest of the four numbers.

Exercise 8.1.2 Consolidation (averaging)

1. *The average of all five of Alice's marks is 82 and the average of her first three marks is 80. What is the average of her last two marks?*

2. *The average of David's first two tests is 86 and the average of David's last two tests is 88. Find the average of David's four tests.*

3. *The average of five numbers is 20. If 50 is added to the five numbers. What is the average of the six numbers?*

4. *The average of five numbers is 8. If one of the numbers are removed, the new average of the remaining numbers is 9. What is the value of the number that was removed?*

5. *The average weight of 5 boys is 54 kg. The average of weight of 5 girls is 48 kg. Find the average weight of these 10 children.*

8.2 Problem Solving 2 (Working backwards)**Exercise 8.2.1**

1. Joe chooses a number. He multiplies it by 5, then adds 6, then divides it by 2. His end result is 33. What number did he choose?

2. John has some marbles, he gave $\frac{1}{3}$ his marbles to his brother Michael and 12 marbles to his sister Rebecca. After he bought another 20 marbles he have a total of 48 marbles. How many marbles did John have at the beginning?

3. What number belongs in the square so as to make the number sentence true?

$$\square \div 5 + 12 = 13$$

4. Suppose five days after the day before yesterday is Sunday. What day of the week will tomorrow then be?

5. Suppose you enter an elevator at a certain floor. Then the elevator moves up 7 floors, down 5 floors, and up 4 floors. You are then at floor 8. At what floor did you initially enter the elevator?

8.3 Problem Solving 3 (Rate)

Exercise 8.3.1

1. A car travels 120 km in 2 hours. In this rate how far would it travel in 5 hours?

2. Two trains leave at the same time from stations that are 120 km apart. They travel towards each other, with one train travelling at 55 km/h and the other travelling at 65 km/h. How long will it take for the two trains to meet each other?

3. Two trains are leave the same station at the same time in opposite directions. One train travelling at 58 km/h and another travelling at 64 km/h. How far apart are they after one and a half hours?

4. George can row a boat 4 km/h in still water. He goes to Land Cove river and the current flows at 1 km/h. George plans to row 12 km down stream to the fishing pond, then back to his original starting position.

(a) What is the equivalent rowing speed downstream?

(b) What is the equivalent rowing speed upstream?

(c) What is the total time for his trip?

Exercise 8.3.2 Consolidation (rate)

1. At an average speed of 90 km/h a train takes $2\frac{1}{2}$ hours to travel from town A to town B. How long will it take if the train is travelling at an average speed of 60 km/h?

2. A train cover 60 km in 40 minutes. How far will it go in $1\frac{1}{2}$ hours?

3. A country train travels at 68 km/h between two towns. The trip takes $3\frac{1}{2}$ hours. What is the distance between these two towns?

4. Averaging 60 km/h a car takes $2\frac{1}{2}$ hours to travel a certain distance. How long will it take if the car is travelling at 45 km/h?

5. Average 40 km/h it takes 6 hours to drive to a town. How long will it take if we average 60 km/h?

8.4 Problem Solving 4 (Ratio)

Exercise 8.4.1

1. David has twice as much money as Keith. When David gave Keith \$10, both had the same amount.

(a) How much did David have originally?

(b) How much do they have altogether?

2. The ratio of the mass of Michael to the mass of Ben is 9 : 7. Michael is 16 kg heavier than Ben. Find the total mass of the two men.

3. The ratio of the mass of Tony to the mass of Ken is 7 : 5. If Ken is 60 kg, find the mass of Tony.

4. The ratio of the mass of Bob to the mass of Joe is 8 : 6. If Joe is 18 kg lighter than Bob find the total mass of two men.

Exercise 8.4.2 Consolidation (Ratio)

1. The ratio of Ben's reading time to that of Adam's reading times is 2 : 3. Their total daily reading time is 2 hours. For how long does Adam read each day?

2. Ray reads 30 books each month. The ratio of books he reads in the morning to that at night is 2 to 3. How many books does Ray read at night?

3. Bonnie and Cathy shared some marbles. The ratio of their shares is 4 : 3. If Cathy has 18 marbles.

(a) How many marbles did Bonnie get?

(b) How many more marbles did Bonnie get?

4. The ratio of Emma's money to that of Alice's money is 5 : 6. If Alice has \$8.00 more than Emma. How much does each girl have?

8.5 Diagnostic Test

1. The ratio of Bob's reading time to that of John's reading times 4 : 6. Their total reading time is $1\frac{1}{2}$ [10] hours. For how long does John read?

2. A son, his mother and his father have a combined age of 85 years. The ratio of the son's age to this [10] mother's age and his father's age is 2:7:8. Find the son's age.

3. The average of four numbers is 22, If the fifth number is added, the new average of five numbers is [10] 23. What is the fifth number?

4. The ratio of Linda's money to Rebecca's money is 4 : 8. If they have \$240 altogether, how much [10] does each girl have?

5. Peter is 15 kg heavier than Tony. Their total mass is 77 kg. What is the body mass of Tony? [10]

6. Graham's average scores for the first 4 tests was 90. What score must he get for the last test to have [10] an average score of 92?

7. A large group of school children went on an excursion to the Powerhouse Museum. The teachers [10] could separate them into groups of 10, 16 or 20 without anyone remaining. If there were between 50 and 100 children, how many children went on the excursion?

8. Suppose three days after tomorrow is Friday. What day of the week was yesterday? [10]

9. A van can travels at 90 km/h. How far will it travel in $3\frac{1}{2}$ hours? [10]

10. The ratio of Mike's money to Charles' money is 4 : 7. Charles has \$120 less than Mike. How much [10] money do they have altogether?
