

## 4.5 Modeling With Algebra Worksheet #1

MPM1D

1. Write an algebraic expression to represent each description.

a) triple a number \_\_\_\_\_

b) for more than a number \_\_\_\_\_

c) half a number \_\_\_\_\_

d) five less than double a number \_\_\_\_\_

2. Write an equation to represent each sentence.

a) four times a number is 112 \_\_\_\_\_

b) a perimeter increased by 12 is 56 \_\_\_\_\_

c) five more than triple a number is 29 \_\_\_\_\_

d) the sum of two consecutive integers is 63 \_\_\_\_\_

3. Solve each equation in question 2.

a)

b)

c)

d)

4. Estaban is 6 years older than his brother Raoul. The sum of their ages is 38. How old are the brothers?

5. Two friends enter a trivia challenge as a team. Fayth scored 200 more points than Jamal. As a team, they collected a total of 2250 points. How many points did each friend earn?

6. Natalie, Chantal, and Samara play together as a forward line on a hockey team. At the end of the season, Chantal had scored eight more goals than Natalie while Samara had scored twice as many goals as Natalie. The three girls scored a total of 52 goals. How many goals did each girl score?

7. The sum of three consecutive integers is 54. Find the numbers.

**8.** Paloma works part-time, 4 hours per day, selling fitness club memberships. She is paid \$9/h, plus a \$12 commission for each 1-year membership she sells.

a) Write an algebraic expression that describes Paloma's total earnings.

b) Find the amount Paloma makes in 8 hours when she sells 7 memberships.

c) How many memberships does Paloma need to sell to earn \$600 in a 24 hour work week?

**9.** The mass of a banana plus its peel is 360g. The mass of the banana is four times the mass of the peel. What is the mass of the peel?