

## Unit 4: 3B Review Sheet (R)

### Part 1: Story Problems

1.) Stanley buys  $b$  bananas for  $d$  dollars each.

She spends a total of  $t$  dollars on bananas.

Write an equation to represent the relationship between  $t$  and  $b$ .

$$b \cdot d = t \quad \underline{\underline{\text{or}}}$$
$$bd = t$$

2.) Laser Quest charges  $d$  dollars per

guest and a fixed \$80 rental fee for

parties. Write an equation that

represents the total cost,  $t$ , for 12 guests.

$$12d + 80 = t$$

-----Check your answers.-----

3.) Tammi has \$16 to spend at the movies. The movie ticket costs \$9.50. Each candy item costs \$1.50. How many candy items can she afford?

$$16 = 9.50 + 1.50c$$
$$-9.50 \quad -9.50$$
$$\frac{6.50}{1.50} = \frac{1.50c}{1.50}$$
$$4.\bar{3} = c$$

4 candy items

4.) Joshua bought 3 goldfish, 2 hamsters, and 2 rats for a total of \$18.00. The cost of each goldfish is \$1.80. The cost of each hamster is \$2.50. What is the cost of each rat?

$$3(1.80) + 2(2.50) + 2x = 18.00$$
$$5.40 + 5.00 + 2x = 18.00$$
$$10.40 + 2x = 18.00$$
$$-10.40 \quad -10.40$$
$$\frac{2x}{2} = \frac{7.60}{2}$$

$x = \$3.80$  per rat

5.) 10 less than the product of  $x$  and 5 is 55.

a. Write the equation described above.

$$5x - 10 = 55$$

b. What is the value of  $x$ ?

$$5x - 10 = 55$$
$$+10 \quad +10$$
$$\frac{5x}{5} = \frac{65}{5} \quad x = 13$$

-----Check your answers.-----

### Part 2: Solve for the variable.

6.) Solve for  $m$ .

$$\frac{-8m}{-8} = \frac{48}{-8}$$

$$m = -6$$

7.) Solve for  $n$ .

$$18 = -5n - 7$$
$$+7 \quad +7$$

$$\frac{25}{-5} = \frac{-5n}{-5}$$

$$-5 = n$$

8.) Solve for x.

$$\frac{2}{3}x + \frac{3}{4} = 8$$

$$-\frac{3}{4} \quad -\frac{3}{4}$$

$$\frac{2}{3}x = 7\frac{1}{4}$$

$$\frac{2}{3}x = \frac{29}{4} \cdot \frac{3}{2} = \frac{87}{8} \text{ or } 10\frac{7}{8}$$

-----Check your answers.-----

9.) Solve for x.

$$\frac{x+4}{7} - 11 = -10$$

$$+11 \quad +11$$

$$\frac{x+4}{7} = 1 \cdot 7$$

$$x+4 = 7$$

$$-4 \quad -4$$

$$x = 3$$

10.) Solve for z.

$$3(2z+4) = -78$$

$$6z - 12 = -78$$

$$+12 \quad +12$$

$$\frac{6z}{6} = \frac{-66}{6}$$

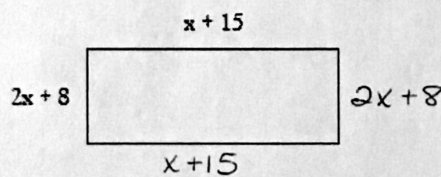
$$z = -11$$

-----Check your answers.-----

### Part 3: Area and Perimeter

11.) Part A. Write the expression representing the perimeter of the rectangle below.

Perimeter =  $6x + 46$  (simplest form)



Part B. If the perimeter is equal to 34, what is the value of x?

$$6x + 46 = 34$$

$$-46 \quad -46$$

$$\frac{6x}{6} = \frac{-12}{6}$$

$$x = -2$$

-----Check your answers.-----