

# Analyzing Relations Worksheet #3

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Hour: \_\_\_\_\_

**Directions:** Determine the rate of change, initial value and equation (when not given) for each linear relationship and answer the question that follows.

1. Marissa needs a plumber and has narrowed her choices down to these two companies. The job has been estimated to take 4 hours. If  $x$  is the number of hours and  $y$  is the cost in dollars, which company should Marissa use?

a. *Pat's Plumbing*

$$y = 30x + 100$$

Initial value: \_\_\_\_\_

Rate of change: \_\_\_\_\_

b. *Poopers R Us*

# of Hours	0	3	6	9
Cost in dollars	50	170	290	410

Initial value: \_\_\_\_\_

Rate of change: \_\_\_\_\_

Equation: \_\_\_\_\_

**WHICH PLUMBER IS THE BETTER DEAL?**

2. Hank wants to join a club that delivers delicious cuts of beef, chicken, fish & pork once a month. He and his family use about 30 pounds of meat each month.  $x$  is the number of pounds and  $y$  is the cost in dollars.

a. *Delicious Deliveries*

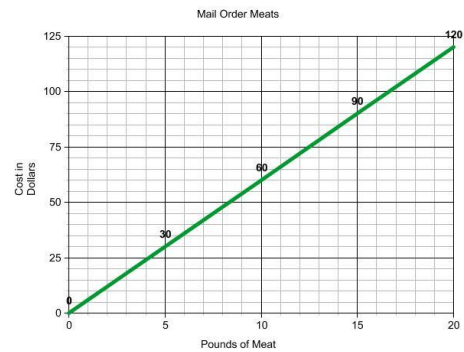
Delicious Deliveries charges a membership fee of \$100 for its members and \$3.50 per pound of meat

Initial value: \_\_\_\_\_

Rate of change: \_\_\_\_\_

Equation: \_\_\_\_\_

b. *Mail Order Meats*



Initial value: \_\_\_\_\_

Rate of change: \_\_\_\_\_

Equation: \_\_\_\_\_

**WHICH COMPANY IS THE BETTER DEAL?**

**Directions:** Determine the rate of change, initial value and equation (when not given) for each linear relationship and answer the question that follows.

3. Bern needs some repairs done on his car and has narrowed his choices down to these two companies. The job has been estimated to take 6 hours. If  $x$  is the number of hours and  $y$  is the cost in dollars, which company should Bern choose?

a. *Cars & More*

$$y = 55x + 75$$

Initial value: \_\_\_\_\_

Rate of change: \_\_\_\_\_

b. *Auto Savers*

Auto Savers charges a \$55 diagnostic fee and \$60 per hour for car repairs.

Initial value: \_\_\_\_\_

Rate of change: \_\_\_\_\_

Equation: \_\_\_\_\_

**WHICH CAR REPAIR SHOP IS THE BETTER DEAL?**

4. Ann wants to purchase salmon steaks for her family of 5. She checks prices at two seafood stores in order to get the best price.  $x$  is the number of salmon steaks and  $y$  is the cost in dollars.

a. *Scrumptious Salmon*

# of Steaks	0	3	6	9
Cost (\$)	9	32.25	55.50	78.75

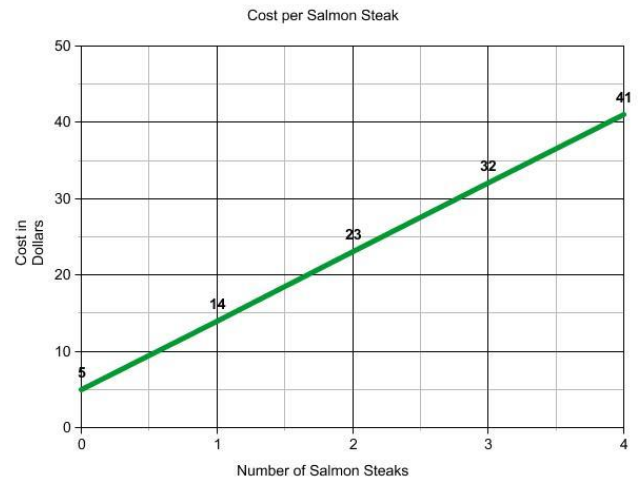
Initial value: \_\_\_\_\_

Rate of change: \_\_\_\_\_

Equation: \_\_\_\_\_

**WHICH STORE HAS THE BETTER DEAL?**

b. *Sam's Steaks*



Initial value: \_\_\_\_\_

Rate of change: \_\_\_\_\_

Equation: \_\_\_\_\_