Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_ Date: \_\_\_\_\_\_

**4.3-4.7 Review Word Problems \_Classwork**

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| 1. Write an equation of a line that passes through the point (8, 2), that is (a) parallel and (b) perpendicular to the graph of the equation y = 4x – 3.

EXAMPLE |
| 1. Write an equation of a line that passes through the point (6, 10), that is parallel to the graph of the equation $y= \frac{1}{2}x+3$.
 | 1. Write an equation of a line that passes through the point (3, -7), that is perpendicular to the graph of the equation $y= \frac{1}{2}x+3.$
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| 1. One of your friends gives you $10 for a charity walkathon. Another friend gives you an amount per mile. After 5 miles, you have raised $13.50 total. Write an equation that represents the amount y of money you have rasied after x miles.

EXAMPLE |
| 1. You can water the plants in your classroom at a constant rate. After 5 seconds, your watering contains 58 ounces of water. Fifteen seconds later, the can contains 28 ounces of water.
2. Write an equation that represents the amount y (in ouunces) of water in the can after x seconds.
3. How much water was in the can when you started watering the plants? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. When is the watering can empty? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

EXAMPLE |
| 1. The equation d = rt where d is the distance (in feet), r is the rate (in feet per second), and t is the time (in seconds). Write equations for each runner below. Rank them in order from fastest to slowest.

Patrick runs at a rate of 15 feet per second.Eric runs for 30 seconds and goes 540 feet.Justine runs for 36 seconds and goes 612 feet.ANSWER: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. Six friends create a website. The website earns money by selling banner ads. Companies pay $10 a month and $0.0005 per click to operate the website.
2. Write a linear equation that represents the monthly income y (in dollars) for x clicks.

 EQUATION: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_1. Graph the linear equation that represents your monthly income y (in dollars) for x clicks.

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| 1. You work at a restaurant as a host and a server. You earn $7.65 for each hour you work as a server and $9.45 for each hour you work as a host. Let x represent the number of hours you work as a host and y represent the number of hours you work as a server. Your combined earnings this month are $160.65.
2. Write an equation in standard form (AX + BY = C) that models your earnings.

 EQUATION: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_1. Graph the equation.

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| 1. A industrial sized sink’s water level is going down at a constant rate. After 10 minutes, it has 12 gallons of water left. Three minutes later, it has 3 gallons of water left.
2. Write an equation that represents the amount y (in gallons) of water in the can after x seconds.
3. How much water was in the sink when you started draining it? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. When will the sink be empty? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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Solutions :

1a) y = 4x – 30 1b) $y= -\frac{1}{4}x+4$ 2a) $y= \frac{1}{2}x+7$ 3) y = -2x – 1 4) y = .07x + 10 5a) y = -2x + 68 5b) 68 ounces

5c) after 34 seconds 6) Patrick: d = 15t Eric: d = 18t Justine: d = 17t (Eric is the fastest)

7a) y = 0.0005x + 10

7b) GRAPH

 8a) 9.45x + 7.65y = 160.65

8b)



9) y = -140x + 500

9a) y = -3x + 42 5b) 42 gallons 5c) 14 minutes