Name: _____   Due Date: _____

Word Problem Wrap Up: Chapter 5   Show all work on a separate piece of paper.

1. A recipe for 12 corn muffins calls for 1 cup of flour. The number of muffins you can make varies directly with the amount of flour you use. You have 2 ½ cups of flour. How many muffins can you make?

2. The distance d you bike varies directly with the amount of time t you bike. Suppose you bike 13.2 mi in 1.25 h. What is an equation that relates d and t? What is the graph of the equation?

3. The force you need to apply to a lever varies directly with the weight you want to lift. Suppose you can lift a 50-lb weigh by applying 20 lb of force to a certain lever.
    a. What is the ratio of force to weight for the lever?
    b. Write an equation relating force and weight. What is the force you need to lift a friend who weighs 130 lb?

4. A car gets 32 mi per gallon. The number of gallons g of gas used varies directly with the number of miles m traveled.
    a. Suppose the price of gas is $3.85 per gallon. Write a function giving the cost c for g gallons of gas. Is this a direct variation? Explain your reasoning.
    b. Write a direct variation equation relating the cost of gas to the miles traveled.
    c. How much will it cost to buy gas for a 240-mi trip?

5. The price p you pay varies directly with the number of pencils you buy. Suppose you buy 3 pencils for $.51. How much is each pencil, in dollars?

6. A scooter can travel 72 mi per gallon of gasoline and holds 2.3 gal. The function d(x) = 72x represents the distance d(x) in miles, that the scooter can travel with x gallons of gasoline. How many miles can the scooter go with a full tank of gas?

7. The table at the right shows the number of hours a clerk works per week and the amount of money she earns before taxes. If she worked 34 h per week, how much money would she earn, in dollars?

8. Suppose you have a $5-off coupon at a fabric store. You buy fabric that costs $7.50 per yard. Write an equation that models the total amount of money y you pay if you buy x yards of fabric. What is the graph of the equation.

Weekly Wages

Time (h)	Wages ($)
12	99.00
17	140.25
21	173.25
32	264.00

9. The temperature at sunrise is 65^0F. Each hour during the day, the temperature rises 5^0F. Write an equation that models the temperature y, in degrees Fahrenheit, after x hours during the day. What is the graph of the equation?

10. Suppose you are doing a 5000-piece puzzle. You have already placed 175 pieces. Every minute you place 10 more pieces.
    a. Write an equation in slope-intercept form to model the number of pieces placed. Graph the equation.
    b. After 50 more minutes, how many pieces will you have placed?

11. A sailboat beagins a voyage with 145 lb of food. The crew plans to eat a total of 15 lb of food per day.
    a. Write an equation in slope-intercept form relating the remaining food supply y to the number of days.
    b. Graph your equation.
    c. The crew plans to have 25 lb of food remaining when they end their voyage. How many days does the crew expect their voyage to last?

12. The relationship between altitude and the boiling point of water is linear. At an altitude of 8000 ft, water boils at 197.6^0F. AT an altitude of 4500 ft, water boils at 203.9^0F. Write an equation giving the boiling point b of water in degrees Fahreheit, in terms of the altitude a, in feet. What is the boiling p;oint of water at 2500 ft?

13. In a video game, you earn 5 points for each jewel you find. You earn 2 points for each star you find. Write and graph an equation that represents the number of jewels and stars you must find to earn 250 points. What are three combinations of jewels and stars you can find that will earn you 250 polnts?

14. A store sells T-shirts for $12 each and sweatshirts for $15 each. You plan to spend $120 on T-shirts and sweatshirts. Write and graph and equation thatrepresents this situation. Whate are three combinations of T-shirts and sweatshirts you can buy for $120