Name: _____ Date: _____ Period: _____

Unit 1 Day 5 - Solve Literal Equations Classwork

Frank knows that D = RT is an equation that gives the distance when the rate and time are known. He rode his bike for one and a half hours and his bike computer told him he was going 15.7 miles per hour. Multiplying the rate by the time tells him he went a total of 23.55 miles.

1. Frank knows that his favorite shaved ice stand is 18 miles away, and wonders how long it would take him to get there on his bike if he went the same rate. Use mathematical properties to rewrite the Distance equation to solve for Time instead of Distance.

2. The next day, Frank wants to go back to his favorite shaved ice stand to try their new flavor, Tiger's Blood Lychee. He only has an hour and twenty minutes before his dentist appointment, so he wonders how fast he would have to pedal to make it to the Shaved Ice Stand in 2/3 of an hour. Use mathematical properties to rewrite the Distance equation, solving for Rate instead of Distance.

Given the following equations, <u>solve each for x</u>. SHOW YOUR WORK.

3. $5x + 2 = 17$

4. $y = 2x + 8$

5. $\frac{2}{3}x = 16$

6. $\frac{2}{3}x = 16 + y$

7. Write the equation in terms of x: $5x + 2y = 17$

8. Write the equation in terms of y: $5x + 2y = 17$

Given the following formulas, solve for the indicated variable.

9. $3x + 2y = 12$ for y

10. $\frac{1}{2}y + 2x = 4$ for y

11. $A = \frac{1}{2}(b_1 + b_2)$ for b_2

12. $A = LWH$ for H

13. What are supplementary angles?

Write an equation for this relationship.

14. What are complementary angles?

Write an equation for this relationship.

15. What are alternate interior angles?

Write an equation for this relationship.

16. What are vertical angles?

Write an equation for this relationship.