Algebra 1
Unit 2 Study Guide
Solving Linear Equations

Name _____ Block _____ Date _____

Solve each equation.

1) $2x + 8 = 12$

2) $\frac{1}{5}y = 4$

3.) $\frac{x}{-2} = 20$

4) $24 + 12z = 12(z + 3)$

5) $5x + 14 - 2x = 9 - (4x + 2)$

Solve the proportions.

6) $\frac{7}{8} = \frac{x}{12}$

7) $\frac{x}{7} = \frac{12}{21}$

8) $\frac{x}{x+5} = \frac{-1}{4}$

9) $\frac{20}{14} = \frac{x}{x-3}$

Solve for y (slope – intercept form: y = mx +b)

10) $y + 10x = 3$

11) $8x + y - 4 = 0$

12) $3y - 9x = 27$

13) $24 - 4y = 8x$

Solve the equation for y. Then evaluate for x = 6.

14) $3x + 2y = 12$

15) $14 = -7x + y$

Solve the formula for the indicated variable

16) $A = \frac{1}{2} bh$; solve for b

17) $D = rt$; solve for r

18) $P = 2L + 2W$; solve for W

19) $I = prt$; solve for r.

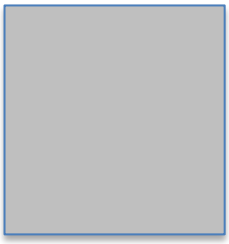
Word problem fun!!!!

20. Melanie told Katie she wanted to earn $200 in interest over the next 6 years. Her bank is offering 4.25% simple interest right now. How much money does Melanie need to put in the bank? Round your answer to the nearest penny. (I = prt)

21. Chris and William decided to travel to a football game. They didn't want to be late for the 12:00 kick off but William was running late. They knew the game was 150 miles away and they planned on traveling at a constant rate of speed (65 mph). If they leave the house at 9:30 a.m. will they make it in time to see the start of the game?

22. The cheerleaders would like to purchase Bubbler Pride t-shirts with their last name on the back. Each shirt costs $12 plus $0.25 per letter. How many letters were put on a shirt that cost $13.75?

23. Find the **perimeter** of the square.



24. Find the dimensions of the rectangle if the perimeter is 44 inches.