Warm Up: Unit 1- Functions, Transformations, and Systems Algebra 2 Kitt

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period:\_\_\_\_\_

**1.2 Graphing Linear Equations**

1. Graph the equation $y=3x+2$ in. 2. Graph the equation $2x+5y=20$ using slope/intercept form x- and y-intercepts.

 

**1.3 Evaluating Functions**

3. State the domain and range of. Is it a function? Circle: yes no

4. Find  if.

**1.4 Applications of Linear Functions**

5. *A certain predication equation says that if the average temperature outside is, then the cost of fuel for a household is $50 for a month. If the temperature averages, then the average cost for fuel is $64 per month.*

 a) Find the slope of the prediction equation.

1. Find the prediction equation.

c) Find the y-intercept of the prediction equation.

d) Predict the cost for fuel if the temperature averages  for the month.

**1.5 Graphing Absolute Value Functions 1.6 Solving Absolute Value Equations**

*Graph the absolute value equation.* *Solve the following equation. Be sure to check your solution.*

 6. Graph $y=\left|x-4\right|+1$ 7. $ 8\left|4x-3\right|=64$



**1.7 Graphing Systems of Equations**

**1.8 Systems of Equations**

*Solve the system of equations by graphing. Describe the solution.*



8. 

*Use substitution to find the solutions for the system of equations.*

9.  10. 

*Use elimination to find the solutions for the system of equations.*

11.  12. 

**1.9 Applications of Linear Systems**

13. **Sales**: The drama club at Lincoln High School sells hot chocolate and coffee at the school’s football games to make money for a special trip. At one game, they sold $200 worth of hot drinks. They need to report how many of each type of drink they sold for their club records. Marsha knows that they use 295 cups that night. If hot chocolate sells for $.75 and the coffee sells for $.50, how many of each type of hot drinks did they sell?

**1.10 Graphing Linear Inequalities and Systems**

*Graph the following inequalities.*

 14. $y\leq 3x+2$ 15. $\begin{matrix}y>-5x-7\\y\leq x+1\end{matrix}$



**1.11 Linear Programming**

16. Stitches Inc. can make at most 30 jean jackets and 20 leather jackets in a week. It takes a worker 10 hours to make a jean jacket and 20 hours to make a leather jacket. The total number of hours by all of the employees can be no more than 500 hours per week. The profit on a jean jacket is $20, and the profit on a leather jacket is $50. How many of each type should be produced in order to maximize profit? What is the maximum profit?



**1.12 Piecewise Functions**

17. Graph the following piecewise function.



 $f\left(x\right)=4, x\leq 3$

 $f\left(x\right)=x, -3<x\leq 2$

 $f\left(x\right)=-x+2, x>2$