**Chapter 2 Test Review Sheet**

**Name:**  **Date:**

Identify the terms, factors and coefficients of the following equations. (3 Points)

1). $-15+9y- 6z$ 2). $ 10d+3a-15b$

 Terms: Terms:

 Factors: Factors:

 Coefficients: Coefficients:

Interpret the parts of the following expression (2 points)

3). Vandan is buying fruits and vegetables. He buys *W* apples for $.50 per apple and *Z* carrots for $.05 per carrot. What does the expression $.50w+ .05z$ represent?

Create and expression for the following algebraic models. Simplify your expression. (2 points)

4). The price of an item plus 15% sales tax. 5). The price of a house plus 30% closing costs.

Solve the following expressions. (3 Points)

6). $ 2x+60= 150$ 7). $\frac{2}{5}x+8=3$

Create and solve an algebraic expression for each word problem. (3 points)

8). One month, Molly worked 3 hours more than Dylan, and max worked 4 times as many hours as Molly. Together they worked 80 hours. Find the number of hours each person worked.

9). One moving company charges $200 plus $10 per hour. Another moving company charges $150 plus $20 per hour. At what number of hours will the charge by both companies be the same? What is the charge?

10). Nick plans to make a down payment plus monthly payments in order to buy a motorcycle. At one dealer she would pay $1500 down and $75 each month. At another dealer, she would pay $2000 down and $100 each month. After how many months would the total amount paid be the same for both dealers? What would that amount be?

11. The perimeter of a parallelogram is 200 meters. The width of the parallelogram is 10 meters less than its length. Find the length and the width of the parallelogram.

12). Kim works 4 hours more each day than Jill does, and Jack works 2 hours less each day than Jill does. Over 2 days, the number of hours Kim works is equal to the difference of 5 times the number of hours Jack works and the number of hours Jill works. How many hours does each person work each day?

|  |  |  |
| --- | --- | --- |
|  | Hours Per Day | Hours over 2 days |
|  |  |  |
|  |  |  |
|  |  |  |

Solve the following equations for the indicated variable. (2 Points)

13). Solve for P. 14). Solve for P. 15). Solve for W

 4P + 10R = Q $\frac{2}{3}$( P + 9) = Y m = WTC

16). The formula c = 5p + 215 relates c, the total cost in dollars of hosting a birthday party at a skating rink, to p, the number of people attending. If Allie’s parents are willing to spend $250 for a party, how many people can attend?

 Solve the Equation for p Substitute Values Into New Equation

Solve and graph the following Inequalities. (3 Points)

17). 6 + 3(x + 2) ≤ 24 18). x + 2 > -2(6 - 1x)

19). The school band will sell pizzas to raise money for new uniforms. The supplier charges $75 plus $5 per pizza. The band members sell the pizzas for $10 each. Write, solve, and graph an inequality to find how many pizzas the band members will have to sell to make a profit?

20). Zachary is planning to send a video game to each of his two brothers. If he buys the same game for both brothers and pays $2.50 to ship each game, how much can he spend on each game without spending more than $75? Write, solve, and graph an inequality for this situation.

Solve the following Inequalities and graph your results. (3 points).

21). -4 < x - 5 < 9 22). -9 < 3x + 6 ≤ 36

23). x – 3 ≥ 8 OR x -10 ≤ -26 24). 2x -1 < 19 OR 20x ≥ 300

Graph the following problem. (2 Points).

25). The recommended alkalinity level for swimming pool water is between 45 and 49 parts per million, inclusive.

Complete the truth table (12 points)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| P | Q | PTrue or False? | Q True or False? | P **AND** QTrue or False? |
| **Red is a color** | **9 is an odd number** |  |  |  |
| **Red is a fruit**  | **9 is an odd number** |  |  |  |
| **Red is a color** | **9 is an even number** |  |  |  |
| **Red is a fruit** | **9 is an even number** |  |  |  |

Complete the truth table (12 points)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| P | Q | PTrue or False? | Q True or False? | P **OR** QTrue or False? |
| **Pennsylvania is a state** | **Owls can fly**  |  |  |  |
| **Pennsylvania is a country** | **Owls can fly**  |  |  |  |
| **Pennsylvania is a country** | **Owls cannot fly** |  |  |  |
| **Pennsylvania is a state** | **Owls cannot fly** |  |  |  |