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Do Now: Think of two numbers whose sum is 10 . Write your answers as pairs of coordinates. Graph your results below:


AIM: GRAPHING LINEAR EQUATIONS TO DETERMINE THE SOLUTION SET

1. There is enough space in your garden to plant ten plants. You want to plant watermelons \& pumpkins. List the possible combinations of the number of watermelons and pumpkins you could plant. Graph the results of the possible combinations of plants.

2. Given the graph to the right:

Is the graph discrete or continuous? Explain your answer.


Pencils
3. Samantha purchases a package of sugar cookies. The nutrition label states that each serving size of 3 cookies contains 160 Calories. Samantha creates the graph below showing the number of cookies eaten and the number of Calories consumed.
(a) Explain why it is appropriate for Samantha to draw a line through the points on the graph.
(b) How many possible solutions can be graph?

(c) Is the graph discrete or continuous? Explain your answer.
4. Max purchased a box of green tea mints. The nutrition label on the box stated that a serving of three mints contains a total of 10 Calories.
(a) On the axes below, graph all of the possible solutions to represents the number of Calories in $x$ mints.

(b) How many possible solutions can be graph?
(c) Is the graph discrete or continuous? Explain your answer.
$\qquad$ Date $\qquad$
Unit 3
Lesson 2

## HW\#

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1. The number of calories burned $y$ after $x$ hours of rock climbing is represented by the table below.
a. Graph the solutions.
b. How many possible solutions will satisfy this function?
c. Is the graph discrete or continuous? Explain you answer.

| Hours <br> Kayaking, $\boldsymbol{x}$ | Calories <br> Burned, $\boldsymbol{y}$ |
| :---: | :---: |
| 2 | 600 |
| 4 | 1200 |
| 6 | 1800 |
| 8 | 2400 |


2. Describe a situation that the accompanying graph may represent. Label the axes according to your scenario

3. If Rosa's age is represented by $R$, which inequality represents the statement "Rosa is at most 29 years old"?

1) $R<29$
2) $R>29$
3) $R \leq 29$
4) $R \geq 29$
4. The expression $\frac{2 x^{2}+10 x-28}{4 x+28}$ is undefined when $x$ is
1) 7 , only
2) -7 , only
3) 7 or -2
4) -7 or 2
5. Which equation represents a vertical line?
1) $y=-x$
2) $y=12$
3) $x=y$
4) $x=12$
6. If $a x+3=7-b x$, what is $x$ expressed in terms of $a$ and $b$ ? **Show work!!!
1) $\frac{4}{a b}$
2) $-\frac{4}{a b}$
3) $\frac{4}{a+b}$
4) $-\frac{4}{a+b}$
7. $(x-6)^{2}$ is equivalent to : **Show work!!!
1) $x^{2}-36$
2) $x^{2}+36$
3) $x^{2}-12 x+36$
4) $x^{2}+12 x+36$
8. What is the conjugate of $(x+4)$ ?
