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Due: Tuesday, December $13^{\text {th }} 2016$
Each section has a released question from the NYS Math 8 test. The questions surrounding it help you think about the various skills needed to solve the problem. Answer all questions. Show ALL Work.

Key Concept:

1. Wanda says the $y$-intercept is when $y=0$. Willie says the $y$-intercept is when $x=0$. Who is correct?
2. A helicopter takes off from the roof of a building that is 200 feet above ground. The graph shows the altitude of the helicopter as it rises steadily for several minutes.

Find the rate of change:

Find the initial value:

What does the initial value tell you about this situation?


Write the equation of the line that models this situation.
3. The equation $A(w)=250-25 w$ represents the amount of money $A(w)$ in a savings account after $w$ weeks. What is the initial value? What is the rate of change?

What does it tell you about the situation?
What does it tell you about the situation?

## NYS Test Question

The relationship between temperature in degrees Fahrenheit and degrees Celsius is shown in the graph below.


## What is the meaning of the $y$-intercept?

A) The change in degrees Fahrenheit for every change of one degree Celsius
B) The change in degrees Celsius for every change of one degree Fahrenheit
C) The temperature in degrees Fahrenheit when the temperature is 0 degrees Celsius
D) The temperature in degrees Celsius when the temperature is 0 degrees Fahrenheit
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Complete the Tables and Graph the Functions. Make sure to put arrows on the end as these functions are continuous.


## NYS Test Question

Which equation does NOT represent a linear function?
A) $y=2(x-3)$
B) $y=2^{2}-3 x$
C) $y=\frac{x+1}{5}$
D) $y=2 x^{2}+4 x$

| $y=\frac{x+1}{5}$ |  |  |  |  |  |  |  |  | $y=2 x^{2}+4 x$ |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 5 |  |  |  |  | $\square$ |  |  |  |  | $\not ⿻$ |  |  |  | $x$ | $2 x^{2}+4 x$ | $y$ |
| $x$ | $\frac{x+1}{5}$ | $y$ |  |  |  |  |  | $\theta$ |  |  |  |  |  |  | $\#$ | \# | -3 |  |  |
| -6 |  |  |  |  |  |  |  | , |  |  |  |  | - |  | - | - |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\theta$ | -2 |  |  |
| -1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\rightarrow$ |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | $7$ |  |  |  | -1 |  |  |
| 4 |  |  |  |  |  |  |  | 較 |  |  | $\#$ |  | O |  |  | $\rightarrow$ | 0 |  |  |
| 9 |  |  |  |  |  | $\#$ |  |  |  |  |  |  |  |  |  | $\cdots$ |  |  |  |
|  |  |  |  | - | $\bigcirc$ | , |  | $\cdots$ |  | - | - | , | 1 | - | - | $\cdots$ | 1 |  |  |

