Algebra 1-2: Unit 2 Representations and Functions Performance Task
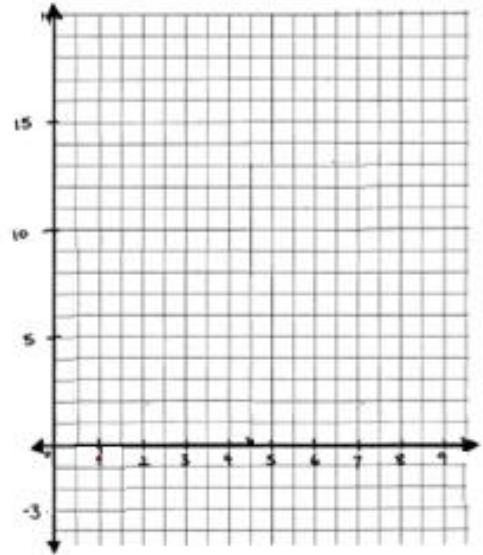
Name: _____

Period: _____ Date: _____

Professor Botano is gathering data on the growth rate of a certain new hybrid seed. He spilled coffee on his clipboard and destroyed most of the data, but he DID remember that *the seed had been growing at a constant rate throughout his observations and that the plant lived a total of 10 days*. Help him reconstruct the data.

1) Does this situation describe a discrete or continuous relationship? Explain.

2) Figure out the missing values in the table:

# of days since seed was planted	Height of seedling (in inches)
0	-3
2	
4	7
6	12
8	
10	

3) Graph the function (be sure to label axes)

4) What is the plant's daily growth rate?

5) Write a function for the height of the seedling in terms of days (use *h* for height and *d* for days):

6) a. Determine the domain and range of your function.

Domain: _____ Range: _____

b. Explain what the domain and range represent in the context of the problem:

Domain: _____ Range: _____

7) What is a possible explanation for the number in the height spot on day 0?

8) Find the value of $h(1)$. Interpret your answer.

9) Find the value of d when $h(d) = 20$ Interpret your answer.