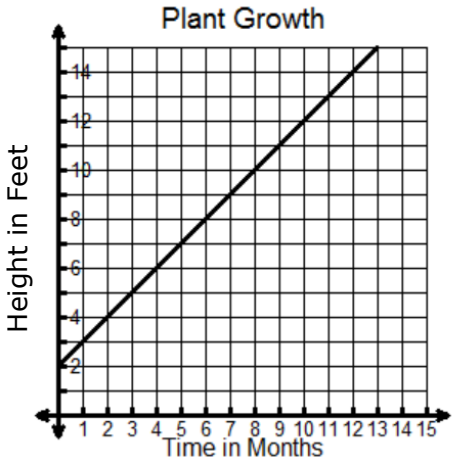
Name _____ Date _____

Identifying Domain and Range

Explain Independent Practice – Answer Key

Use the following scenario and graph for questions 1 – 5.

Alberto planted a 2-feet tall bamboo stalk in his back yard. The bamboo stalk grew at a rate of one foot per month. The graph below represents the height of the bamboo over a 13-month period.



1. What is the domain for this scenario?
   $0 \leq x \leq 13$

2. What is the range for this scenario?
   $2 \leq y \leq 15$

3. If Alberto records the height of the bamboo for 15 months instead of 13 months, what would be the new domain for the scenario?
   $0 \leq x \leq 15$

4. If the original height of the bamboo was 4 feet, what would be the range for the 13-month period?
   $4 \leq y \leq 17$

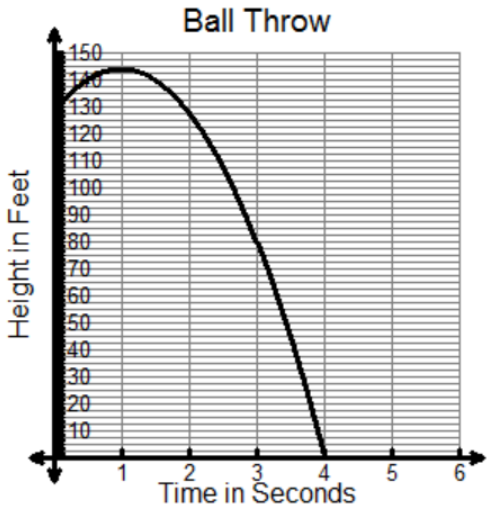
5. If the bamboo grew three-fourths of a foot each month instead of one foot each month, what would be the domain and range for a 12-month period?

   Domain: **$0 \leq x \leq 12$**
   Range: **$2 \leq y \leq 11$**

Name _____ Date _____

Use the following scenario and graph for questions 6 – 9.

A ball is thrown straight up from the top of a 128-feet tall building with an initial speed of 32 feet per second. The graph below shows the height of the ball as a function of time.



6. What is the domain for the scenario?
   $0 \leq x \leq 4$

7. What is the range for the scenario?
   $0 \leq y \leq 144$

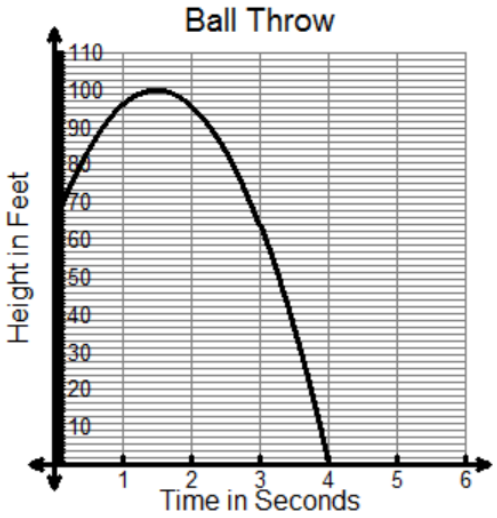
8. If the ball was in the air for 5 seconds, what would be the domain for the scenario?
   $0 \leq x \leq 5$

9. If the maximum height of the ball was 150 feet what would be the range for the scenario?
   $0 \leq y \leq 150$

Name _____ Date _____

Use the following scenario and graph for questions 10 – 13.

A ball is thrown straight up from the top of a 64-feet tall building with an initial speed of 48 feet per second. The graph below shows the height of the ball as a function of time.



10. What is the domain for the scenario?
$0 \leq x \leq 4$

11. What is the range for the scenario?
$0 \leq y \leq 100$

12. If the ball was in the air for 3 seconds, what would be the domain for the scenario?
$0 \leq x \leq 3$

13. If the maximum height of the ball was 120 feet what would be the range for the scenario?
$0 \leq y \leq 120$