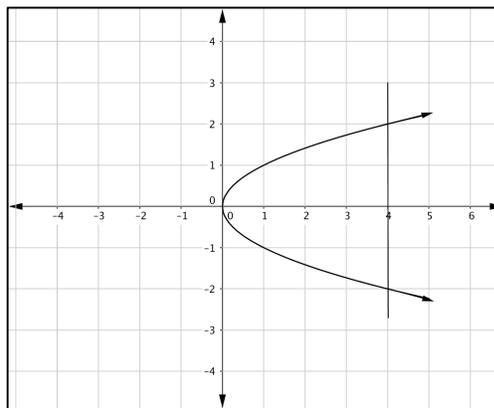


Introduction to Functions
Key Features of Graphs of Functions – Part 1
Independent Practice

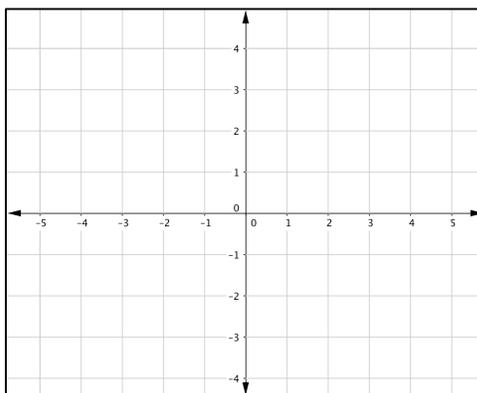
1. The following statement is false. Highlight the two words that should be interchanged to make it a true statement.

In a function, every output value corresponds to exactly one input value.

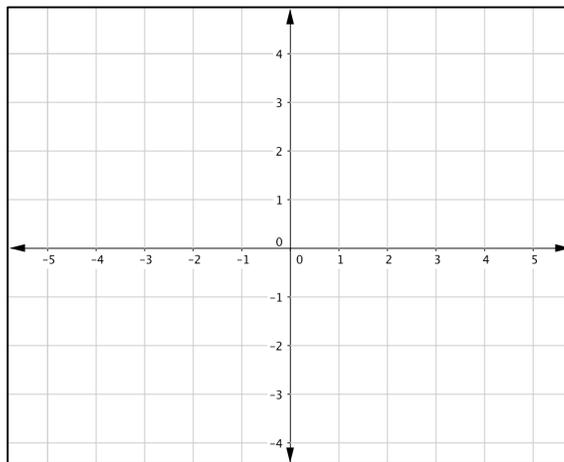
2. The following graph fails the vertical line test and is not a function.



- a. Explain how the vertical line test shows that this relation is NOT a function.
- b. Name two points on the graph that show that this relation is NOT a function.
3. Sketch the graph of a relation that is a function.



4. Sketch the graph of a relation that is NOT a function.



5. Consider the following scenarios. Determine if each one represents a function or not. Explain your answer.

- a. A golf ball is hit down a fairway. The golfer relates the time passed to the height of the ball.

- b. A trainer takes a survey of all the athletes in a school about their height, rounded to the nearest inch, and their grade level. The trainer relates their grade levels to their heights.

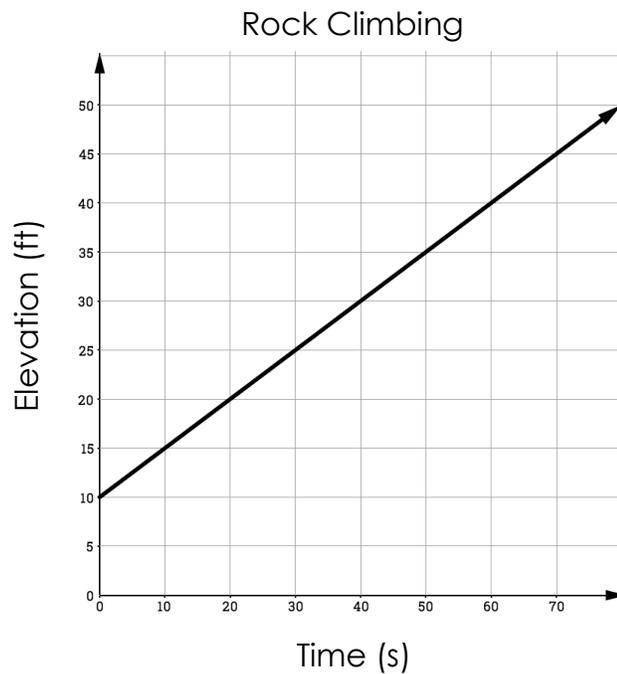
6. Use the word bank to complete the sentences below.

x –coordinate	y –coordinate	x –intercept	y –intercept	solution
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- a. The _____ of a graph is the location where the graph crosses the x –axis.
- b. The _____ of a graph is the location where the graph crosses the y –axis.
- c. The _____ of the y –intercept is always zero.
- d. The _____ of the x –intercept is always zero.
- e. The x –intercept is the _____ to a function or group.



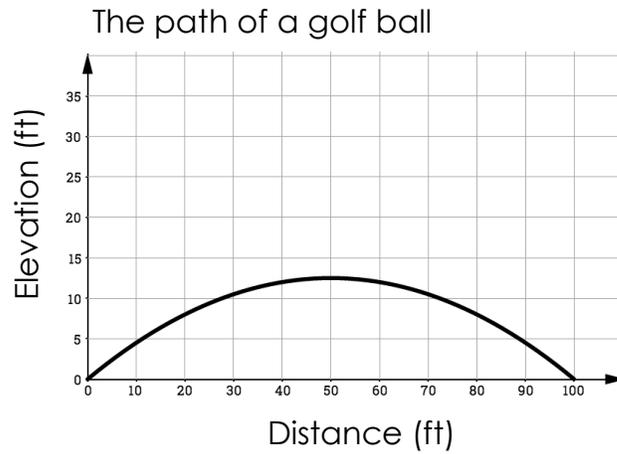
7. The graph below represents a rock climber's height as she ascends a hill.



- a. The above graph is (circle one) linear/nonlinear.
- b. Is the above graph a function? Explain.
- c. What is the y -intercept and what does the y -intercept represent?
- d. Why would there not be an x -intercept for this situation?



8. The graph below represents the path of a golf ball.



- The above graph is (circle one) linear/nonlinear.
- Is the above graph a function? Explain.
- What is the y -intercept and what does the y -intercept represent?
- What is the solution to this graph and what does it represent in this situation?

