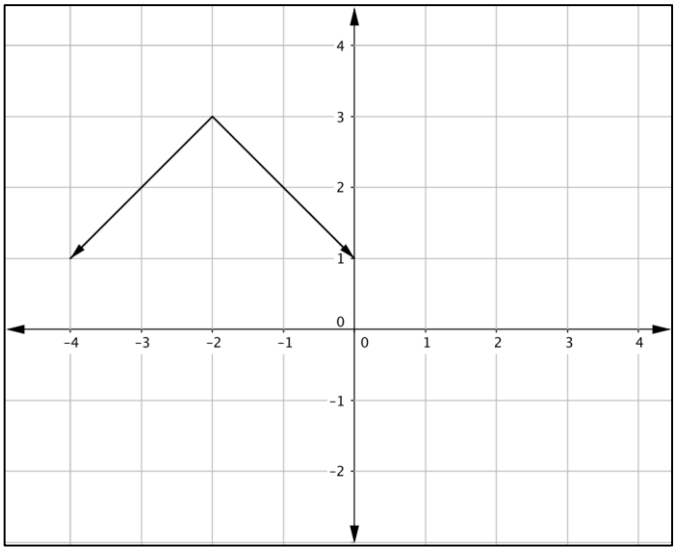
Name _____ Date_____

Introduction to Functions
Key Features of Graphs of Functions – Part 2
Independent Practice

1. Consider the following graph of an absolute value function.



a. Define the domain. All Real Numbers

b. Define the range. $y \leq 3$

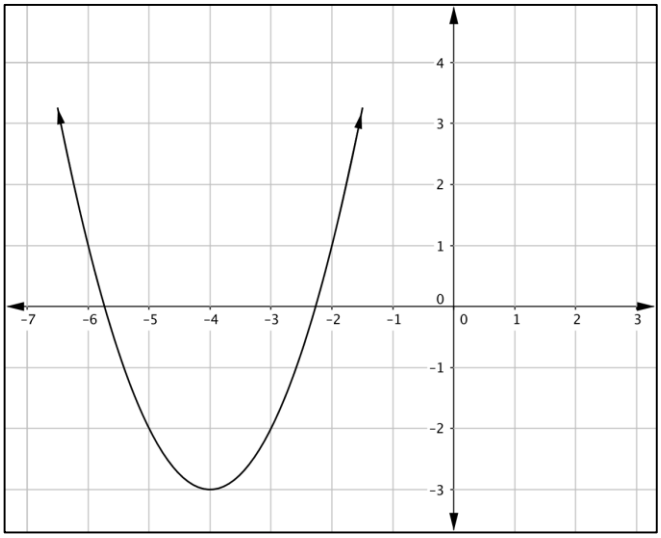
c. Where is the graph increasing? $-\infty < x < -2$ $x < -2$

d. Where is the graph decreasing? $-2 < x < \infty$ $x > -2$

e. Identify any relative maximums. $(-2, 3)$

f. Identify any relative minimums. None

2. Consider the following graph of a quadratic function.



a. Define the domain. All Real Numbers

b. Define the range. $y \geq -3$

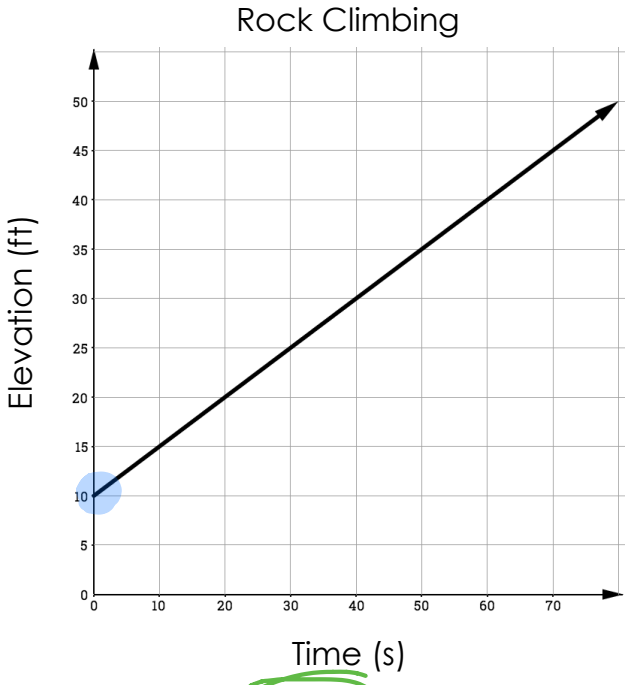
c. Where is the graph increasing? $x > -4$

d. Where is the graph decreasing? $x < -4$

e. Identify any relative maximums. None

f. Identify any relative minimums. $(-4, -3)$

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.

yes- Passes the vertical line test!

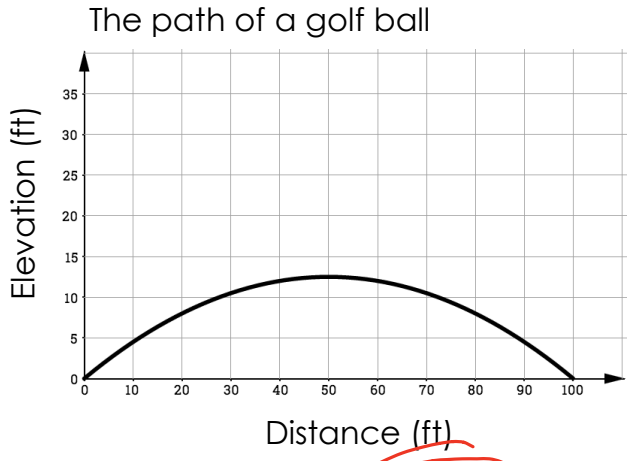
c. What is the y –intercept and what does the y –intercept represent?

10 ft.- Where the climber started

d. Why would there not be an x –intercept for this situation?

They never get to sea level.

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



a. The above graph is (circle one) linear/nonlinear

b. Is the above graph a function? Explain.

yes

c. What is the y –intercept and what does the y –intercept represent?

0 - Golf ball started on the ground

d. What is the solution to this graph and what does it represent in this situation?

0 and 100

Where the ball touches the ground.