

READY, SET, GO!

Name _____

Period _____

Date _____

READY

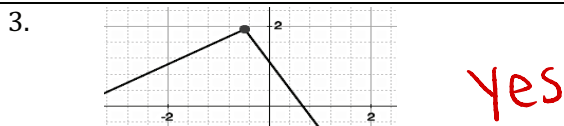
Topic: Recognizing Functions

Function: Every input has a unique output.

Identify which of the following representations are functions. If the representation is NOT a function state how you would fix it so it was.

1. $D = \{(4, -1) (3, -6) (2, -1) (1, 2) (0, 4) (2, 5)\}$ **No**

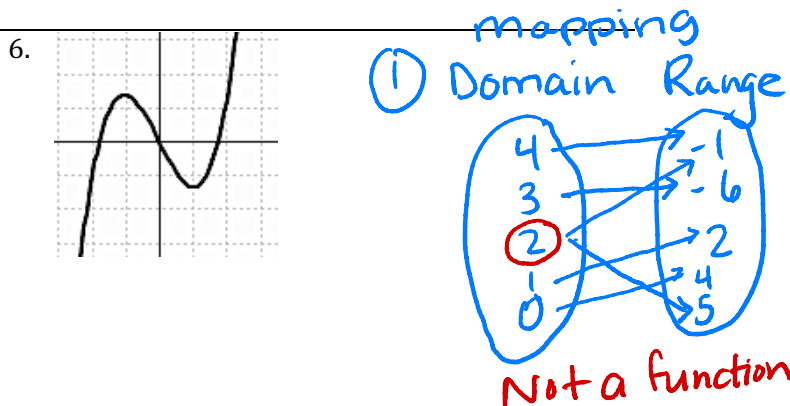
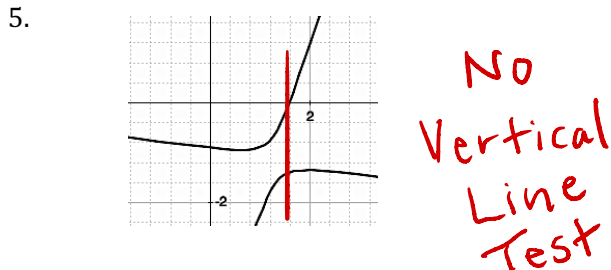
2. The number of calories you have burned since midnight at any time during the day. **yes**



4.

x	-12	-8	-6	-4
f(x)	25	25	25	25

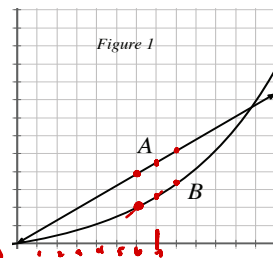
yes



SET

Topic: Comparing rates of change in linear, quadratic, and exponential functions

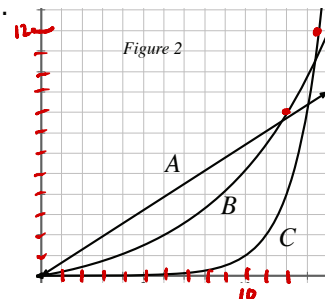
The graph at the right shows a time vs. distance graph of two cars traveling in the same direction along the freeway.



7. Which car has the cruise control on? How do you know?
A) Traveling at a constant rate
8. Which car is accelerating? How do you know?
B) The rate of change is increasing
9. Identify the interval in figure 1 where car A seems to be going faster than car B.

- [0, 6]**
10. For what interval in figure 1 does car B seem to be going faster than car A?
(6, ∞)

11. What in the graph indicates the speed of the cars?
The steepness (Rate of Change)
12. A third car C is now shown in the graph (see figure 2). All 3 cars have the same destination. If the destination is a distance of 12 units from the origin, which car do you predict will arrive first? Justify your answer.



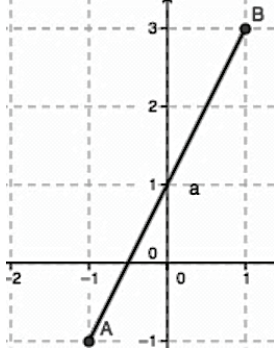
C reaches the distance of 12 first.

GO

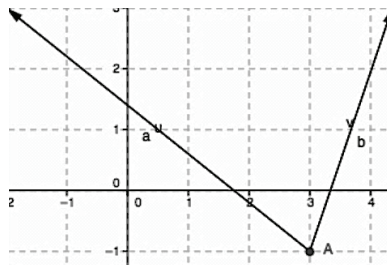
Topic: Identifying domain and range from a graph

State the domain and range of each graph. Use interval notation where appropriate.

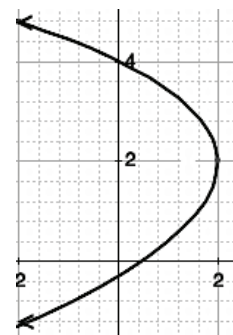
13a. Domain $[-1, 1]$
 b. Range $[-1, 3]$



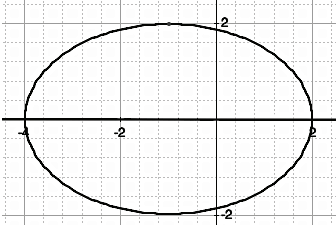
14a. Domain $(-\infty, \infty)$
 b. Range $[-4, \infty)$



15a. Domain $(-\infty, 2]$
 b. Range $(-\infty, \infty)$



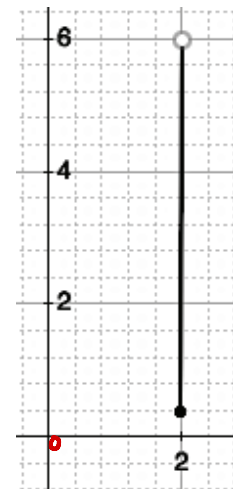
16a. Domain $[-4, 2]$
 b. Range $[-2, 2]$



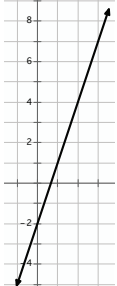
17a. Domain $[-6, \infty)$
 b. Range $[-2, -2]$



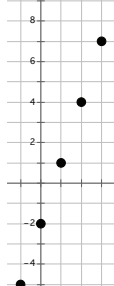
18a. Domain $[2, 2]$
 b. Range $[2, 6]$



19a. Domain $(-\infty, \infty)$
 b. Range $(-\infty, \infty)$



20a. Domain $\{-1, 0, 1, 2, 3\}$
 b. Range $\{-5, -2, 1, 4, 7\}$



21. Are the domains of #19 and #20 the same? Explain.

No, #19 is continuous while #20 is discrete.