

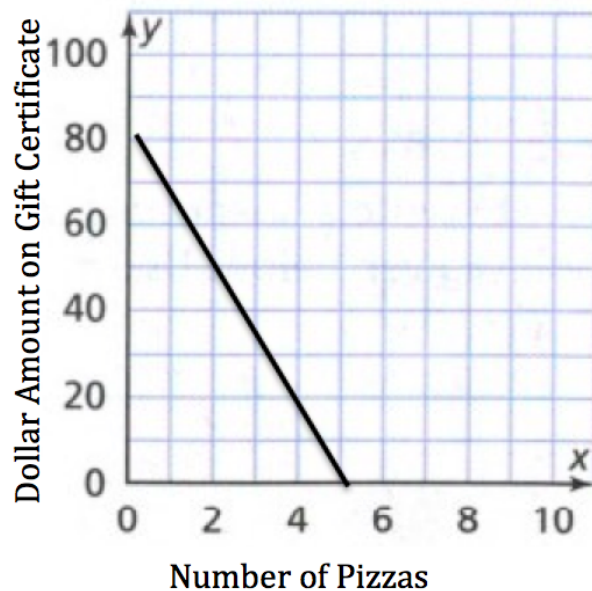
Name:

Class:

## Algebra, Unit 4: Practice Summative Assessment

### Question 1

Function  $p$  represents the amount of money left on a gift certificate as a function of the number of pizzas purchased with the gift certificate. The store only sells whole pizzas. Below is a graph of function  $p$ .



Based on the graph and the situation, which domain and range makes sense for function  $p$ ?

- (A) Domain: all real numbers from 0 to 5. Range: all real numbers from 0 to 80.
- (B) Domain: all whole numbers from 0 to 5. Range: all whole numbers from 0 to 80.
- (C) Domain: all real numbers from 0 to 5. Range: all multiples of 16 from 0 to 80.
- (D) Domain: all whole numbers from 0 to 5. Range: all multiples of 16 from 0 to 80.

## Question 2

Select **all** true statements below.

- Ⓐ A meteorologist predicts a high temperature of  $-5$ . If the high temperature is actually  $-7$ , the absolute error is  $-2$ .
- Ⓑ A meteorologist predicts a high temperature of  $72$ . The function  $q(x) = |x - 72|$  will give us the absolute temperature error when  $x$  is the actual high temperature for that day.
- Ⓒ A meteorologist predicts a high temperature of  $50$ . If the high temperature is actually  $47$ , the absolute error is  $3$ .
- Ⓓ A meteorologist predicts a high temperature of  $-10$ . The function  $r(x) = |x + 10|$  will give us the absolute temperature error when  $x$  is the actual high temperature for that day.

## Question 3

A function is defined by the equation  $f(m) = 10 + 0.5m$ . It gives the total dollar cost of a taxi ride as a function of the number of miles,  $m$ .

Part A In this situation, what does the inverse function show?

Part B Select the inverse function.

Ⓐ  $f(m)^{-1} = \frac{m - 10}{0.5}$

Ⓑ  $f(m)^{-1} = \frac{m + 10}{0.5}$

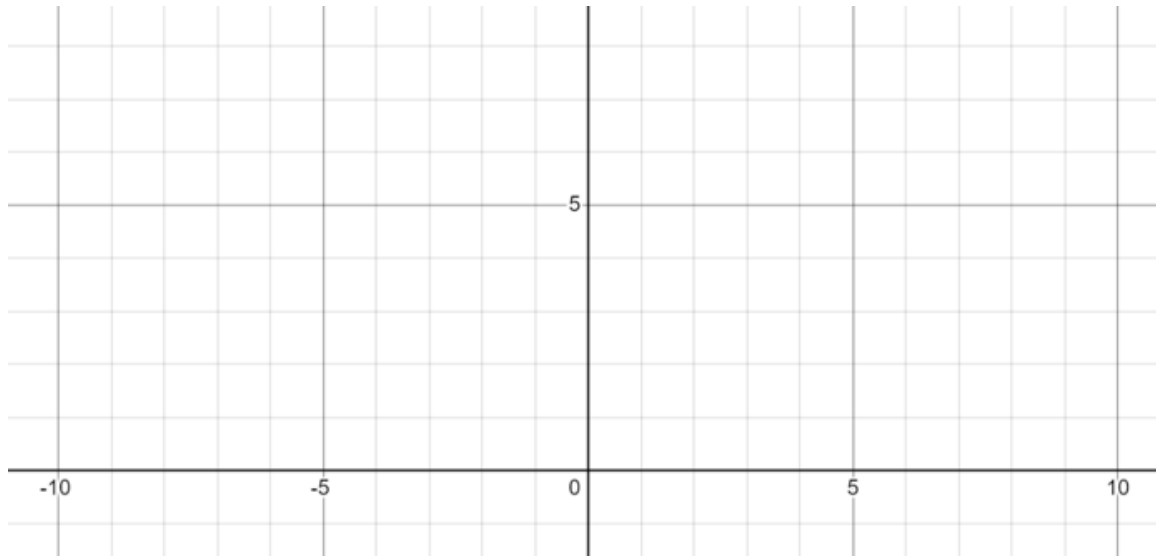
Ⓒ  $f(m)^{-1} = 0.5m - 5$

Ⓓ  $f(m)^{-1} = \frac{m - 10}{2}$

Question 4

Complete the chart and the graph for this function:  $v(x) = |x + 2| + 1$

$x$	$-3$	$-2$	$-1$	$0$
$v(x)$				



### Question 5

A hotel has a fleet of minivans that it uses to shuttle guests to the airport. The hotel uses a function,  $T$ , to determine how many minivans are needed where  $n$  is the number of guests requesting a trip for a certain flight.

These are the rules for the function.

$$T(n) = \begin{cases} 1, & 0 < n \leq 8 \\ 2, & 8 < n \leq 16 \\ 3, & 16 < n \leq 24 \end{cases}$$

Part A      How many seats for guests are in each minivan?

Part B      How many minivans does the hotel have?

Part C      Graph the function.

