

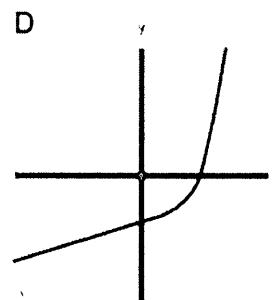
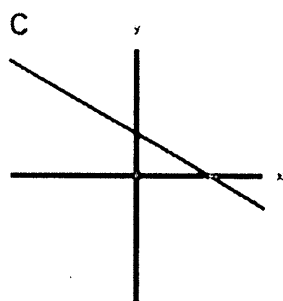
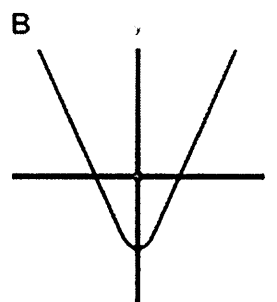
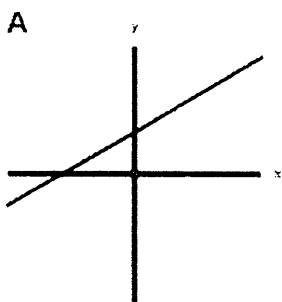
PRACTICE

1. Given: $f(x) = \sqrt{x+4}$

a. Evaluate $f(0)$, $f(-3)$, $f(-4)$, and $f(-5)$

b. Write the domain and range of this function in interval notation.

3. Which of the graphs below does NOT have a range that includes all real numbers? Explain.



4. A function L is defined below.

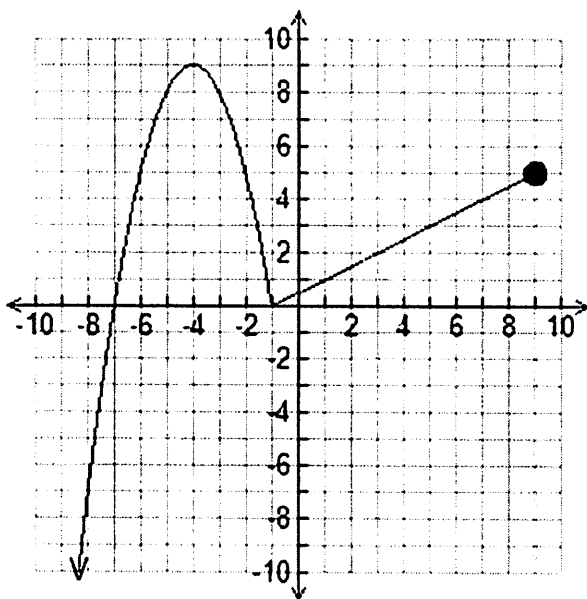
Let $L\{\text{positive integer}\} = \{\text{twice the positive integer}\}$

a. What is $L(9)$? What does it mean?

b. According to function L , is -7 in the domain of L ? Explain why or why not.

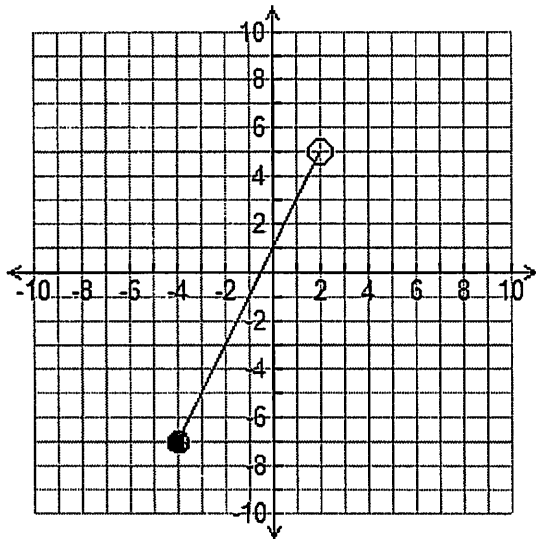
c. According to function L , is 54 in the range of L ? Explain why or why not.

5. Define the domain and range of the function.



6. State two parent functions that have the same domain but different ranges. Write their domains and ranges.

7. What is the domain of the function?



8. Given the function $1.5x - 1 = y$, find the range for the domain $\{-2, 0.5, 6\}$.

PRACTICE

1. Given: $f(x) = \sqrt{x+4}$

a. Evaluate $f(0)$, $f(-3)$, $f(-4)$, and $f(-5)$

$$f(0) = \sqrt{0+4} \quad f(-3) = \sqrt{-3+4}$$

$$f(0) = 2$$

$$f(-3) = 1$$

$$f(-4) = \sqrt{-4+4}$$

$$f(-4) = 0$$

$$f(-5) = \sqrt{-5+4}$$

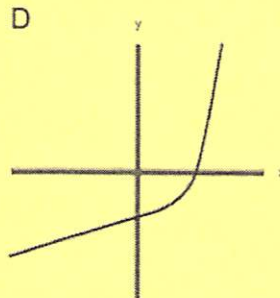
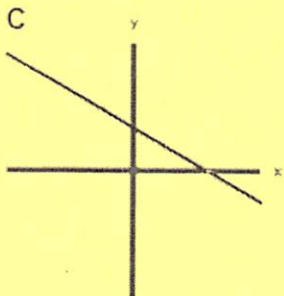
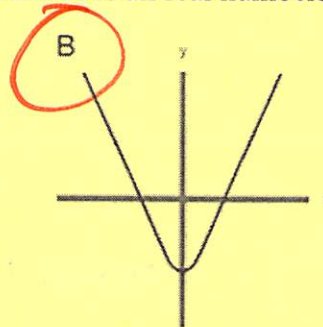
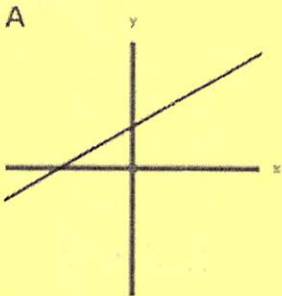
$$f(-5) = i$$

b. Write the domain and range of this function in interval notation.

$$\text{Domain: } [-4, \infty)$$

$$\text{Range: } [0, \infty)$$

3. Which of the graphs below does NOT have a range that includes all real numbers? Explain.



4. A function L is defined below.

Let $L\{\text{positive integer}\} = \{\text{twice the positive integer}\}$

a. What is $L(9)$? What does it mean?

$$L(x) = 2x$$

$$L(9) = 18$$

b. According to function L , is -7 in the domain of L ? Explain why or why not.

-7 is not a positive integer so it is not in the domain of L .

c. According to function L , is 54 in the range of L ? Explain why or why not.

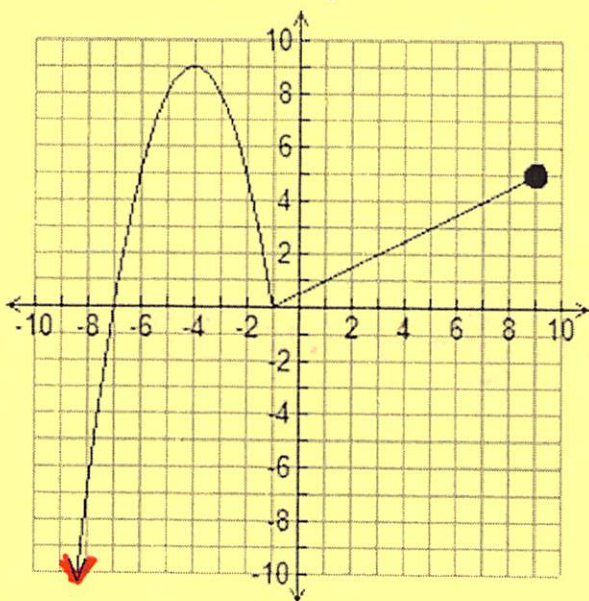
Yes 54 is in the range.

$$f(27) = 54$$

27 is an ^{positive} integer

54 is a positive integer

5. Define the domain and range of the function.



Domain: $(-\infty, 9]$

Range: $(-\infty, 9]$

6. State two parent functions that have the same domain but different ranges. Write their domains and ranges.

Linear

$$y = x$$

Domain: $x \in \text{Reals}$

Range: $y \in \text{Reals}$

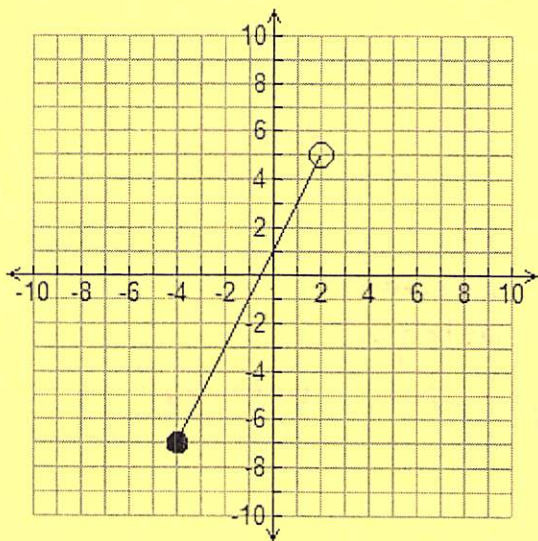
Absolute Value

$$y = |x|$$

$x \in \text{Reals}$

$$y \geq 0$$

7. What is the domain of the function?



$$[-4, 2)$$

8. Given the function $1.5x - 1 = y$, find the range for the domain $\{-2, 0.5, 6\}$.

$$\text{Range: } \{-4, -0.25, 8\}$$