

Bell Ringer - Solve the equation.

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$$\frac{4}{6}x + \frac{1}{6}x$$

$$\frac{5}{6}x + 8 = -17$$

$$\frac{6}{5} \cdot \frac{5}{6}x = -\frac{25}{1} \cdot \frac{6}{5}$$

$$x = -30$$

Chapter 12-1 Functions with Square Roots Notes Day 2

Function: A rule that shows a relationship between two quantities.

Example $y = x + 3$

Here the y-value is three more than the x-value

Domain: the set of x-values in a function; also called the input(s)

Range: the set of y-values in a function; also called the output(s)

Considerations:

- 1) A square root cannot be negative.
- 2) All nonnegative numbers is a possible answer for a domain/range.
- 3) Use a table of values when graphing. Choose easy numbers when taking a square root.

Review. Find the set of domain and range values for each function.
Provide a table of 4 ordered pairs.

$$1) y = 7 + \sqrt{x}$$

Domain:

Range:

Review. Find the set of domain and range values for each function.
Provide a table of 4 ordered pairs.

1) $y = 7 + \sqrt{x}$

Domain: all nonnegative numbers
 $x \geq 0$

Range: all numbers greater than or equal to 7
 $y \geq 7$

x	y

Review. Find the set of domain and range values for each function.
Complete the table. Why did I use 1 and 9 for "x" ?

2) $y = \sqrt{2x + 7}$

Domain:

Range:

x	y
1	
9	

Review. Find the set of domain and range values for each function.
Complete the table. Why did I use 1 and 9 for "x" ?

$$2) y = \sqrt{2x + 7}$$

x	y
1	3
9	5

Domain: all numbers greater than or equal to $-7/2$
 $x \geq -7/2$

Range: all nonnegative numbers
 $y \geq 0$

p. 713 #58

$$T = 2\pi \sqrt{\frac{L}{384}}$$

You're given T and need to solve for L

p. 713 #58

$$T = 2\pi \sqrt{\frac{L}{384}}$$

$$\frac{8}{2\pi} = \frac{2\pi}{2\pi} \sqrt{\frac{L}{384}}$$

Divide by
 2π

Square both
sides

$$1.27 = \sqrt{\frac{L}{384}}$$
$$(1.27)^2 = \left(\sqrt{\frac{L}{384}}\right)^2$$

Multiply both
sides

$$384 \cdot 1.61 = \frac{L}{384} \cdot 384$$

$$618.24 = L$$

Depending on where you rounded, answer will range from 615 to 630.