Activity 4.2: Radical Equations & Functions

A

Name: _____ Partner's name: _____ Date: _____

Directions: Solve each problem. Check for extraneous solutions. Problem 7 uses a graph for Partner A. Graphs are drawn accurately.

Work alone, then compare after each problem. If answers differ, find the mistake together.

1

$\sqrt{x+7} = 4$

Answer: _____ Match? ☐ Yes ☐ No

2

$\sqrt{x+6} = x$

Answer: _____ Match? ☐ Yes ☐ No

3

$\sqrt[3]{x-5} = 2$

Answer: _____ Match? ☐ Yes ☐ No

4

$\sqrt{x+3} = \sqrt{2x-1}$

Answer: _____ Match? ☐ Yes ☐ No

5

$x^{3/2} = 8$

Answer: _____ Match? ☐ Yes ☐ No

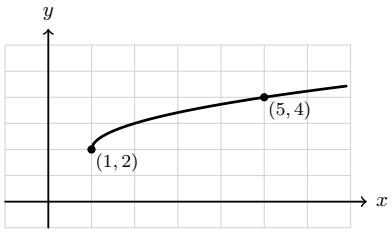
6

If $f(x) = x^2 + 1$ for $x \geq 0$, find $f^{-1}(17)$.

Answer: _____ Match? ☐ Yes ☐ No

7

State the domain of the function graphed.



Answer: _____ Match? ☐ Yes ☐ No

8

The skid speed of a car is $s = \sqrt{24d}$ mph, where d is the skid length in feet. Find s when $d = 150$.

Answer: _____ Match? ☐ Yes ☐ No

UNIT 4 • RADICALS & RATIONAL EXPONENTS

Activity 4.2: Radical Equations & Functions

B

Name: _____ Partner's name: _____ Date: _____

Directions: Solve each problem. Check for extraneous solutions. Problem 7 uses a graph for Partner A. Graphs are drawn accurately.

Work alone, then compare after each problem. If answers differ, find the mistake together.

1

$\sqrt{2x-2} = 4$

Answer: _____ Match? ☐ Yes ☐ No

2

$\sqrt{2x+3} = x$

Answer: _____ Match? ☐ Yes ☐ No

3

$\sqrt[3]{3x-12} = 3$

Answer: _____ Match? ☐ Yes ☐ No

4

$\sqrt{3x-8} = \sqrt{x}$

Answer: _____ Match? ☐ Yes ☐ No

5

$2x^{3/2} = 16$

Answer: _____ Match? ☐ Yes ☐ No

6

If $g(x) = \sqrt{x-1}$, find $g(17)$.

Answer: _____ Match? ☐ Yes ☐ No

7

State the domain of $y = \sqrt{2x-2} - 5$.

Answer: _____ Match? ☐ Yes ☐ No

8

The skid speed of a truck is $s = \sqrt{30d}$ mph, where d is the skid length in feet. Find s when $d = 120$.

Answer: _____ Match? ☐ Yes ☐ No