

**Practice 7-5****Solving Radical Equations**

Solve. Check for extraneous solutions.

1.  $(x - 2)^{\frac{1}{3}} = 5$

2.  $3x^{\frac{4}{3}} + 5 = 53$

3.  $4x^{\frac{3}{2}} - 5 = 103$

4.  $\sqrt{x + 1} = x - 1$

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

6.  $x^{\frac{1}{2}} - 5 = 0$

7.  $\sqrt{x + 7} = x - 5$

8.  $(2x + 1)^{\frac{1}{3}} = -3$

9.  $2x^{\frac{1}{3}} - 2 = 0$

10.  $\sqrt{2x - 5} = 7$

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

12.  $\sqrt{x} + 6 = x$

13.  $\sqrt{x + 2} = 10 - x$

14.  $\sqrt{4x + 2} = \sqrt{3x + 4}$

15.  $(7x - 3)^{\frac{1}{2}} = 5$

16.  $(x - 2)^{\frac{2}{3}} - 4 = 5$

17.  $2\sqrt{x - 1} = \sqrt{26 + x}$

18.  $2x^{\frac{3}{4}} = 16$

19.  $\sqrt{7x - 6} - \sqrt{5x + 2} = 0$

20.  $\sqrt{3x - 3} - 6 = 0$

21.  $5\sqrt{x} + 2 = 12$

22.  $2x^{\frac{4}{3}} - 2 = 160$

23.  $4x^{\frac{1}{2}} - 5 = 27$

24.  $\sqrt{x+1} = x+1$

25.  $\sqrt{2x+1} = -5$

26.  $x^{\frac{1}{6}} - 2 = 0$

27.  $\sqrt{x+2} = x-18$

28.  $(2x+1)^{\frac{1}{3}} = 1$

29.  $x^{\frac{1}{4}} + 3 = 0$

30.  $\sqrt[3]{2x-4} = -2$

31.  $x^{\frac{1}{4}} - 1 = 0$

32.  $(x-2)^{\frac{1}{3}} = -5$

33.  $x^{\frac{1}{3}} - 2 = 0$

34.  $\sqrt{3x} = 6$

35.  $(2x+7)^{\frac{1}{2}} - x = 2$

36.  $\sqrt{4x} - 8 = 0$

37.  $\sqrt{3x+1} - 5 = 0$

38.  $3(2x+4)^{\frac{4}{3}} = 48$

39.  $2\sqrt{x} = \sqrt{x+6}$

40.  $(2x+1)^{\frac{1}{2}} = (5-2x)^{\frac{1}{2}}$

41.  $(x+14)^{\frac{1}{4}} = (2x)^{\frac{1}{2}}$

42.  $\sqrt[3]{x-2} = 4$

# FCAT Practice

Benchmark MA.A.3.4.1



## Gridded Response

On a coordinate plane, the distance between the points  $P(4, y)$  and  $Q(-2, 0)$  is 7 units. What is the value of  $y$ ?

	⊗	⊗	⊗	
⊙	⊙	⊙	⊙	⊙
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9