Name: _____ Date: _____

Fresh Math

Square Root Equations - Medium

Isolate the square root, then solve each equation or inequality. For an inequality, remember that the radicand cannot be negative.

1. $3\sqrt{2x-9}+6=9$
2. $5\sqrt{3x-8}+2=12$
3. $4\sqrt{x+27}+5=29$
4. $3\sqrt{3x+48}-1=17$
5. $4\sqrt{x+37}-2=22$
6. $3\sqrt{x+13}-4=5$
7. $3\sqrt{x+7}-5=7$
8. $4\sqrt{3x+7}-1=19$
9. $\sqrt{2x+6}<2$
10. $3\sqrt{x}<3$

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Square Root Equations - Medium

Isolate the square root, then solve each equation or inequality. For an inequality, remember that the radicand cannot be negative.

11. $5\sqrt{2x + 26} + 9 = 29$

12. $5\sqrt{x - 1} - 6 = 4$

13. $2\sqrt{x - 6} \geq 6$

14. $5\sqrt{3x + 19} + 9 = 29$

15. $5\sqrt{3x + 10} + 3 = 23$

16. $2\sqrt{x + 13} + 2 = 8$

17. $5\sqrt{x + 33} - 1 = 29$

18. $2\sqrt{3x - 12} + 7 = 13$

19. $3\sqrt{2x + 6} < 6$

20. $\sqrt{3x + 18} \geq 3$

Square Root Equations - Medium - Answer Key

1. $3\sqrt{2x-9}+6=9$

   $x = 5$

2. $5\sqrt{3x-8}+2=12$

   $x = 4$

3. $4\sqrt{x+27}+5=29$

   $x = 9$

4. $3\sqrt{3x+48}-1=17$

   $x = -4$

5. $4\sqrt{x+37}-2=22$

   $x = -1$

6. $3\sqrt{x+13}-4=5$

   $x = -4$

7. $3\sqrt{x+7}-5=7$

   $x = 9$

8. $4\sqrt{3x+7}-1=19$

   $x = 6$

9. $\sqrt{2x+6}<2$

   $-3 \leq x < -1$

10. $3\sqrt{x}<3$

    $0 \leq x < 1$

Square Root Equations - Medium - Answer Key

11. $5\sqrt{2x + 26} + 9 = 29$

    x = -5

12. $5\sqrt{x - 1} - 6 = 4$

    x = 5

13. $2\sqrt{x - 6} \geq 6$

    $x \geq 15$

14. $5\sqrt{3x + 19} + 9 = 29$

    x = -1

15. $5\sqrt{3x + 10} + 3 = 23$

    x = 2

16. $2\sqrt{x + 13} + 2 = 8$

    x = -4

17. $5\sqrt{x + 33} - 1 = 29$

    x = 3

18. $2\sqrt{3x - 12} + 7 = 13$

    x = 7

19. $3\sqrt{2x + 6} < 6$

    $-3 \leq x < -1$

20. $\sqrt{3x + 18} \geq 3$

    $x \geq -3$