

Solving Quadratic Equations Review ws

Write the equation in standard form. Identify a, b, and c and then find the discriminant. Determine if the equation has one real, two real or no real solutions.

1. $2x^2 - 4x + 2 = 0$

2. $-5x^2 + 7x - 13 = 2$

3. $4x^2 - 8 = 6x^2 - 3x$

4. $-2x = x^2 + 3x - 7$

Use the quadratic formula to solve the equation. Answers should be in **exact form** (no decimals).

5. $x^2 + 4x = 2$

6. $2x^2 - 8x = 1$

7. $4x^2 + 2x = -2x - 1$

8-19. Solve each quadratic equation using any method you choose.

8. $2(x - 6)^2 = 32$

9. $3x^2 + 2x = 0$

10. $x^2 + 12 = 13$

11. $x^2 - 4x + 3 = 0$

12. $3x^2 + 2x = x^2 + x + 1$

13. $5x^2 - 9x = -3$

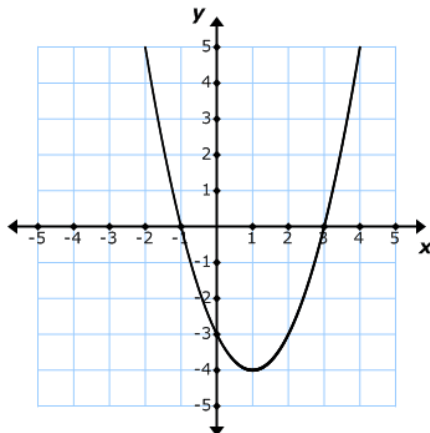
14. $x^2 - 24 = 0$

15. $-4t^2 + 16t = 0$

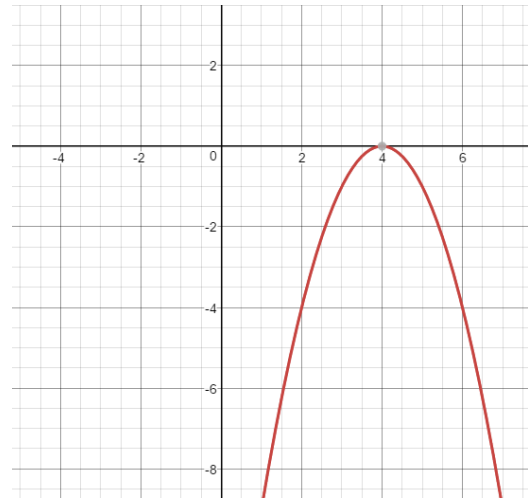
16. $-x^2 + 3x + 4 = -2$

17. $4(x - 5)^2 - 2 = 62$

18.



19.



20. A contestant tosses a horseshoe from one pit to another with an initial vertical velocity of 50 feet per second. The horseshoe is released 3 feet above the ground. Use the model $h = -16t^2 + 50t + 3$ where h is the height (in feet) and t is the time (in seconds) to tell how long the horseshoe was in the air. Round to the nearest hundredth (sketch a graph to help visualize if necessary!).

21. For the following problem $2x^2 - 10x + 8 = 0$

a) Solve the equation by factoring:

b) The quadratic formula:

c) Explain what you notice: