

Quadratic Functions Review

Factoring to Solve Equations with $a \neq 1$ (2)

Factor if needed, then solve the equation.

1. $10x^2 + 21x - 10 = 0$ 2. $14k^2 - 9k - 18 = 0$ 3. $18h^2 + 15h - 18 = 0$

4. $10g^2 + 10 = 29g$ 5. $12k^2 + 15k = 16k + 20$ 6. $18a^2 + 10a = -11a + 4$

7. $40x^2 + 47x - 45 = 0$ 8. $88k^2 + 204k + 80 = 0$ 9. $48h^2 - 8h - 8 = 0$

10. $90g^2 - 28g = 34g + 16$ 11. $80k^2 + 42 = 116k$ 12. $6a^2 - 5a = -4a + 77$

13. Lauren dove into a swimming pool from a 15-foot high diving board with an initial upward velocity of 8 feet per second. Find the time in t seconds it took Lauren to enter the water. Use the model for vertical motion given by the equation $h = -16t^2 + vt + s$ where h is the height in feet, t is the time in seconds, and v is the initial upward velocity in feet per second. (Hint: Let $h = 0$ represent the surface of the pool.)