

Practice – Solving Quadratics Applying the Quadratic Formula and the Discriminant

Solve the equations below using the Quadratic Formula. Leave answers in exact and estimated form. Round solutions to the nearest thousandth, if necessary.

1. $4x^2 + 7x = 15$

2. $10x^2 - 3x - 1 = 0$

3. $-z^2 + z = -14$

4. $8h^2 + 8 = 6 - 9h$

Find the number of solutions for each equation using the discriminant.

5. $2x^2 - x = 21$

6. $5x^2 + 12x + 8 = 0$

7. $x^2 + 25 = 10x$

8. $4 = -16x^2 + 12x$

9. A rectangle with an area of 91 square meters has dimension of $(x+2)$ meters and $(2x+3)$ meters. Solve for the dimensions of the rectangle. Round to the nearest tenth of a meter.