

Solving Quadratics by Taking Square Roots & Completing the Square

Solve each equation by taking square roots. Check your solutions for #1 and #2 by substitution. Round your answers to the nearest hundredth, if necessary.

1) $10b^2 - 5 = 995$

2) $3r^2 - 5 = 7$

3) $7r^2 - 2 = 5$

4) $9n^2 + 7 = 583$

Solve each equation by taking square roots.

5) $4x^2 - 4 = 164$

6) $-10 - 2a^2 = -15$

Solve each equation by completing the square. Check your solutions for #7 and #9 by substitution. Round your answers to the nearest hundredth, if necessary.

7) $x^2 - 16x - 38 = -2$

8) $10a^2 + 20a - 101 = -8$

9) $3v^2 - 18v + 24 = 0$

10) $2b^2 + 20b - 93 = 0$

11) $-3b^2 - 19b + 25 = -10 - 7b - 4b^2$

12) $8k^2 + 14k - 14 = 7k^2$