

Solving Quadratic Equations: Practice Problems with Answers

The problems below are provided in the Practice mode of Solving Quadratic Equations. Before making an assignment, you are encouraged to review the problems, which vary in type and difficulty. Answers are shown in bold.

1) $y^2 - 5y - 36 = 0$ $y = 9$ or $y = -4$	2) $x^2 + 7x = 0$ $x = 0$ or $x = -7$	3) $y^2 - 3y = 70$ $y = 10$ or $y = -7$
4) $3x^2 + 5x + 2 = 0$ $x = -\frac{2}{3}$ or $x = -1$	5) $4x^2 - 14x + 12 = 0$ $x = \frac{3}{2}$ or $x = 2$	6) $10y^2 + 37y = -21$ $y = -\frac{7}{10}$ or $y = -3$
7) $x^2 + 20x + 100 = 0$ $x = -10$	8) $y^2 - 22y + 121 = 0$ $y = 11$	9) $a^2 + 14a + 49 = 0$ $a = -7$
10) $4x^2 + 12x + 9 = 0$ $x = -\frac{3}{2}$	11) $25y^2 - 30y + 9 = 0$ $y = \frac{3}{5}$	12) $49x^2 + 126x = -81$ $x = -\frac{9}{7}$
13) $x^2 - 81 = 0$ $x = 9$ or $x = -9$	14) $y^2 - 36 = 0$ $y = -6$ or $y = 6$	15) $x^2 - 144 = 0$ $x = 12$ or $x = -12$
16) $x^2 - 121 = 0$ $x = 11$ or $x = -11$	17) $9x^2 - 100 = 0$ $x = \frac{10}{3}$ or $x = -\frac{10}{3}$	18) $25y^2 - 400 = 0$ $y = -4$ or $y = 4$
19) $3x^2 + 15x + 18 = 0$ $x = -2$ or $x = -3$	20) $4x^2 + 8x - 140 = 0$ $x = -7$ or $x = 5$	21) $5x^2 - 70x + 240 = 0$ $x = 6$ or $x = 8$
22) $6x^2 + 36x + 54 = 0$ $x = -3$	23) $7y^2 - 56y + 112 = 0$ $y = 4$	24) $12x^2 - 48x = 0$ $x = 0$ or $x = 4$
25) $6y^2 - 486 = 0$ $y = -9$ or $y = 9$	26) $7y^2 - 847 = 0$ $y = -11$ or $y = 11$	27) $-x^2 - 2x + 15 = 0$ $x = 3$ or $x = -5$
28) $-y^2 + 36 = 0$ $y = 6$ or $y = -6$	29) $-z^2 + 121 = 0$ $z = 11$ or $z = -11$	30) $\frac{1}{2}x^2 + \frac{9}{2}x + 7 = 0$ $x = -2$ or $x = -7$
31) $\frac{2}{3}x^2 - 7x + \frac{55}{3} = 0$ $x = \frac{11}{2}$ or $x = 5$ or $x = 5.5$ or $x = 5$	32) $\frac{1}{2}y^2 - \frac{5}{6}y - 2 = 0$ $y = -\frac{4}{3}$ or $y = 3$	33) $x^2 = 5$ $x = \pm\sqrt{5}$

34) $2x^2 - 16 = 0$ $x = \pm 2\sqrt{2}$	35) $-6x^2 + 53 = 11$ $x = \pm\sqrt{7}$	36) $-5y^2 = 180$ no real solutions
37) $7b^2 - 567 = 0$ $b = \pm 9$	38) $\frac{1}{2}x^2 = 9$ $x = \pm 3\sqrt{2}$	39) $x^2 - 4x - 7 = 0$ $x = 2 \pm \sqrt{11}$
40) $x^2 - 2x - 4 = 0$ $x = 1 \pm \sqrt{5}$	41) $y^2 - 6y - 6 = 0$ $y = 3 \pm \sqrt{15}$	42) $y^2 = 2y + 13$ $y = 1 \pm \sqrt{14}$
43) $a^2 = -10a + 12$ $a = -5 \pm \sqrt{37}$	44) $y^2 - y - 3 = 0$ $y = \frac{1 \pm \sqrt{13}}{2}$	45) $2x^2 - x - 5 = 0$ $x = \frac{1 \pm \sqrt{41}}{4}$
46) $5y^2 - y + 10 = 0$ no real solutions	47) $2c^2 = -5c + 3$ $c = \frac{1}{2}$ or $c = -3$	48) $y^2 + y - 1 = 0$ $y = \frac{-1 \pm \sqrt{5}}{2}$
49) $2d^2 = 2d + 1$ $d = \frac{1 \pm \sqrt{3}}{2}$	50) $y^2 = 8 + 4y$ $y = 2 \pm 2\sqrt{3}$	