

# SOLVING POLYNOMIAL EQUATIONS

Solve the following equations. You will need the Quadratic Formula on some.

1.  $3x^2 - 27x + 42 = 0$

2.  $25x^2 - 4 = 0$

3.  $4x^2 + 20x + 25 = 0$

4.  $x^2 - 16x + 48 = 0$

5.  $3y^2 + 4y - 4 = 0$

6.  $5x^2 + 14x = 24$

7.  $10x^2 + 3 = 17x$

8.  $4x^2 - 6x + 3 = 0$

9.  $7x - 3 = 2x^2$

10.  $3x^2 + x - 5 = 0$

11.  $6x^2 - 27x = 15$

12.  $x(x + 35) = -66$

13.  $(2x - 3)^2 - 18 = 0$

14.  $3x^2 - 2x + 4 = 0$

15.  $6x^2 + 13x = 15$

16.  $x(x - 2) = 48$

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Answers

1. 7, 2
2.  $\frac{2}{5}$ ,  $-\frac{2}{5}$
3.  $-\frac{5}{2}$
4. 12, 4
5. -2,  $\frac{2}{3}$
6. -4,  $\frac{6}{5}$
7.  $\frac{1}{5}$ ,  $\frac{3}{2}$
8.  $\frac{3 \pm i\sqrt{3}}{4}$
9.  $\frac{1}{2}$ , 3
10.  $\frac{-1 \pm \sqrt{61}}{6}$
11. 5,  $-\frac{1}{2}$
12. -33, -2
13.  $\frac{3 \pm 3\sqrt{2}}{2}$
14.  $\frac{1 \pm i\sqrt{11}}{3}$
15.  $\frac{5}{6}$ , -3
16. 8, -6