14-05-15-T8

Solve each equation by completing the square.

1) $3x^2 - 2x - 10 = -2 + 2x$

2) $3p^2 - 4p - 9 = -2$

3) $3x^2 + 2x - 9 = -x - 3$

4) $2x^2 + 5x - 1 = 2x - x^2$

5) $2a^2 + 1 = -2a + 2$

6) $4v^2 + v = v^2 + 2$

7) $2n^2 - n = 2n - 1$

8) $n^2 + 3n - 8 = -n^2 + 1$

9) $-m^2 - 2m - 1 = -3m^2 + 3$

10) $2b^2 + 8b = -2 + 3b$

11) $3k^2 - 7 = 5k$

12) $-n^2 + n - 3 = 3n - 3n^2$

14-05-15-T8

Solve each equation by completing the square.

1) $3x^2 - 2x - 10 = -2 + 2x$

$\left\{\frac{2 + 2\sqrt{7}}{3}, \frac{2 - 2\sqrt{7}}{3}\right\}$

2) $3p^2 - 4p - 9 = -2$

$\left\{\frac{7}{3}, -1\right\}$

3) $3x^2 + 2x - 9 = -x - 3$

$\{1, -2\}$

4) $2x^2 + 5x - 1 = 2x - x^2$

$\left\{\frac{-3 + \sqrt{21}}{6}, \frac{-3 - \sqrt{21}}{6}\right\}$

5) $2a^2 + 1 = -2a + 2$

$\left\{\frac{-1 + \sqrt{3}}{2}, \frac{-1 - \sqrt{3}}{2}\right\}$

6) $4v^2 + v = v^2 + 2$

$\left\{\frac{2}{3}, -1\right\}$

7) $2n^2 - n = 2n - 1$

$\left\{1, \frac{1}{2}\right\}$

8) $n^2 + 3n - 8 = -n^2 + 1$

$\left\{\frac{3}{2}, -3\right\}$

9) $-m^2 - 2m - 1 = -3m^2 + 3$

$\{2, -1\}$

10) $2b^2 + 8b = -2 + 3b$

$\left\{-\frac{1}{2}, -2\right\}$

11) $3k^2 - 7 = 5k$

$\left\{\frac{5 + \sqrt{109}}{6}, \frac{5 - \sqrt{109}}{6}\right\}$

12) $-n^2 + n - 3 = 3n - 3n^2$

$\left\{\frac{1 + \sqrt{7}}{2}, \frac{1 - \sqrt{7}}{2}\right\}$