

Intermediate Algebra Skill

Solving Quadratic Form Equations: Negative Integer Exponents

Solve the following equations:

1) $x^{-2} - x^{-1} - 6 = 0$

2) $2x^{-2} - x^{-1} - 1 = 0$

3) $4x^{-2} + x^{-1} - 5 = 0$

4) $m^{-2} + 9m^{-1} - 10 = 0$

5) $15x^{-2} - 2x^{-1} - 1 = 0$

6) $x^{-2} - x^{-1} = \frac{3}{4}$

7) $3x^{-2} - 5x^{-1} + 2 = 0$

8) $8x^{-2} - 2x^{-1} - 3 = 0$

9) $10n^{-2} + 17n^{-1} + 3 = 0$

10) $24n^{-2} + 31n^{-1} + 10 = 0$

11) $w^{-4} - 4w^{-2} + 3 = 0$

12) $w^{-4} - 6w^{-2} + 8 = 0$

Answers to Solving Quadratic Form Equations: Negative Integer Exponents

1) $-\frac{1}{2}, \frac{1}{3}$

2) $-2, 1$

3) $-\frac{4}{5}, 1$

4) $1, \frac{-1}{10}$

5) $3, -5$

6) $\frac{2}{3}, -2$

7) $\frac{3}{2}, 1$

8) $-2, \frac{4}{3}$

9) $-5, -\frac{2}{3}$

10) $-\frac{8}{5}, -\frac{3}{2}$

11) $\pm 1, \pm \frac{\sqrt{3}}{3}$

12) $\pm \frac{\sqrt{2}}{2}, \pm \frac{1}{2}$