

112B MATH

Solve each equation with the quadratic formula.

1) $12x^2 + 2x + 1 = 0$

2) $12r^2 + r + 1 = 0$

3) $2n^2 + 8n - 120 = 0$

4) $2k^2 - 2k - 11 = 0$

5) $5n^2 + 2n - 21 = 0$

6) $4b^2 - 121 = 0$

7) $8r^2 + 12r + 11 = 0$

8) $12m^2 + 2m - 8 = 0$

9) $8x^2 - 11x + 6 = 0$

10) $6a^2 - 8a - 4 = 0$

11) $8v^2 - 7v - 11 = 0$

12) $4x^2 + 9x - 24 = 0$

13) $3x^2 - 2x - 16 = 0$

14) $4n^2 + 12 = 0$

15) $2x^2 - 6x - 108 = 0$

16) $5x^2 - 125 = 0$

17) $12a^2 - 6 = 10$

18) $7a^2 + 8a - 22 = -11$

19) $2p^2 - 6p + 6 = 10$

20) $7x^2 + 3x + 19 = 8$

21) $5r^2 - 10r + 9 = 0$

22) $4x^2 - 9x - 34 = 0$

$$23) 7a^2 - 2a - 13 = 0$$

$$24) 5n^2 + 5n - 1 = 0$$

$$25) 7n^2 + 10n - 21 = 0$$

$$26) 4p^2 - 64 = 0$$

$$27) 6n^2 + 7n - 65 = 3$$

$$28) a^2 - 125 = -4$$

$$29) 6m^2 + 10m + 18 = 8$$

$$30) 6x^2 - 9x - 18 = 6$$

$$31) 4v^2 + 4v - 13 = -5$$

$$32) 12r^2 - 6r + 9 = 10$$

112B MATH

Solve each equation with the quadratic formula.

1) $12x^2 + 2x + 1 = 0$

$$\left\{ \frac{-1 + i\sqrt{11}}{12}, \frac{-1 - i\sqrt{11}}{12} \right\}$$

3) $2n^2 + 8n - 120 = 0$

$$\{6, -10\}$$

5) $5n^2 + 2n - 21 = 0$

$$\left\{ \frac{-1 + \sqrt{106}}{5}, \frac{-1 - \sqrt{106}}{5} \right\}$$

7) $8r^2 + 12r + 11 = 0$

$$\left\{ \frac{-3 + i\sqrt{13}}{4}, \frac{-3 - i\sqrt{13}}{4} \right\}$$

9) $8x^2 - 11x + 6 = 0$

$$\left\{ \frac{11 + i\sqrt{71}}{16}, \frac{11 - i\sqrt{71}}{16} \right\}$$

11) $8v^2 - 7v - 11 = 0$

$$\left\{ \frac{7 + \sqrt{401}}{16}, \frac{7 - \sqrt{401}}{16} \right\}$$

13) $3x^2 - 2x - 16 = 0$

$$\left\{ \frac{8}{3}, -2 \right\}$$

15) $2x^2 - 6x - 108 = 0$

$$\{9, -6\}$$

17) $12a^2 - 6 = 10$

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

19) $2p^2 - 6p + 6 = 10$

$$\left\{ \frac{3 + \sqrt{17}}{2}, \frac{3 - \sqrt{17}}{2} \right\}$$

21) $5r^2 - 10r + 9 = 0$

$$\left\{ \frac{5 + 2i\sqrt{5}}{5}, \frac{5 - 2i\sqrt{5}}{5} \right\}$$

2) $12r^2 + r + 1 = 0$

$$\left\{ \frac{-1 + i\sqrt{47}}{24}, \frac{-1 - i\sqrt{47}}{24} \right\}$$

4) $2k^2 - 2k - 11 = 0$

$$\left\{ \frac{1 + \sqrt{23}}{2}, \frac{1 - \sqrt{23}}{2} \right\}$$

6) $4b^2 - 121 = 0$

$$\left\{ \frac{11}{2}, -\frac{11}{2} \right\}$$

8) $12m^2 + 2m - 8 = 0$

$$\left\{ \frac{-1 + \sqrt{97}}{12}, \frac{-1 - \sqrt{97}}{12} \right\}$$

10) $6a^2 - 8a - 4 = 0$

$$\left\{ \frac{2 + \sqrt{10}}{3}, \frac{2 - \sqrt{10}}{3} \right\}$$

12) $4x^2 + 9x - 24 = 0$

$$\left\{ \frac{-9 + \sqrt{465}}{8}, \frac{-9 - \sqrt{465}}{8} \right\}$$

14) $4n^2 + 12 = 0$

$$\{i\sqrt{3}, -i\sqrt{3}\}$$

16) $5x^2 - 125 = 0$

$$\{5, -5\}$$

18) $7a^2 + 8a - 22 = -11$

$$\left\{ \frac{-4 + \sqrt{93}}{7}, \frac{-4 - \sqrt{93}}{7} \right\}$$

20) $7x^2 + 3x + 19 = 8$

$$\left\{ \frac{-3 + i\sqrt{299}}{14}, \frac{-3 - i\sqrt{299}}{14} \right\}$$

22) $4x^2 - 9x - 34 = 0$

$$\{4.25, -2\}$$

$$23) 7a^2 - 2a - 13 = 0$$

$$\{1.513, -1.227\}$$

$$25) 7n^2 + 10n - 21 = 0$$

$$\{1.159, -2.588\}$$

$$27) 6n^2 + 7n - 65 = 3$$

$$\{2.833, -4\}$$

$$29) 6m^2 + 10m + 18 = 8$$

$$\left\{ \frac{-5 + i\sqrt{35}}{6}, \frac{-5 - i\sqrt{35}}{6} \right\}$$

$$31) 4v^2 + 4v - 13 = -5$$

$$\{1, -2\}$$

$$24) 5n^2 + 5n - 1 = 0$$

$$\{0.171, -1.171\}$$

$$26) 4p^2 - 64 = 0$$

$$\{4, -4\}$$

$$28) a^2 - 125 = -4$$

$$\{11, -11\}$$

$$30) 6x^2 - 9x - 18 = 6$$

$$\{2.886, -1.386\}$$

$$32) 12r^2 - 6r + 9 = 10$$

$$\{0.632, -0.132\}$$