

Name: _____

● Solve the Quadratic Equations ●

- ① What are the two roots of the equation $2x^2 - 7x = 0$? _____

- ② Write the quadratic equation whose roots are 3 and 4.

- ③ For what value of p the equation $px^2 + 4x + 1 = 0$ will have equal roots? _____

- ④ If one root of the equation $3x^2 - kx - 2 = 0$ is 2, find the value of k . Also find the other root.

- ⑤ Solve for x : $p^2 x^2 + (p^2 - q^2)x - q^2 = 0$ _____

- ⑥ Is the equation $x(x + 3) + 5 = x^2 + 9x + 8$ quadratic or not?

- ⑦ Find a quadratic function with vertex at $(-5, 2)$ and passing through $(-4, 9)$ _____

- ⑧ Find a quadratic function whose one of the roots is $3 - \sqrt{5}$

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Solve the Quadratic Equations

Answers

① What are the two roots of the equation $2x^2 - 7x = 0$? $\left\{0, \frac{7}{2}\right\}$

② Write the quadratic equation whose roots are 3 and 4.
 $x^2 - 7x + 12 = 0$

③ For what value of p the equation $px^2 + 4x + 1 = 0$ will have equal roots? 4

④ If one root of the equation $3x^2 - kx - 2 = 0$ is 2, find the value of k . Also find the other root. $\left\{2, -\frac{1}{3}\right\}$

⑤ Solve for x : $p^2 x^2 + (p^2 - q^2)x - q^2 = 0$ $\left\{\frac{q^2}{p^2} - 1\right\}$

⑥ Is the equation $x(x + 3) + 5 = x^2 + 9x + 8$ quadratic or not?
No

⑦ Find a quadratic function with vertex at $(-5, 2)$ and passing through $(-4, 9)$ $f(x) = 7(x + 5)^2$

⑧ Find a quadratic function whose one of the roots is $3 - \sqrt{5}$
 $x^2 - 6x + 4 = 0$