

NAME: _____

P.I. A.A.27: Understand and apply the multiplication property of zero to solve quadratic equations with integral coefficients and integral roots

1. Explain how to use a graphing calculator to solve a quadratic equation.
2. Which method would you use to solve the equation $3x^2 - 12 = 0$? Justify your reasoning.
3. Can a quadratic equation in the form $x^2 + bx = 0$ always be solved by factoring? Explain your answer.
4. Write a quadratic equation that can be solved by factoring. Find the solutions.

Graph the function. Then in the CALC feature, use ROOT to find the x -intercepts of the graph. The x -
[1] intercepts are the solutions to the equation.

[2] Answers may vary. Sample: Factoring because the equation can be easily factored.

[3] Yes; you can always factor $x^2 + bx$ as $x(x + b)$.

[4] Answers may vary. Sample: $x^2 - 2x + 3 = 0$, $x = -1$, $x = 3$.