Algebra 2 & Trigonometry Journal: Quadratics with Noninteger Solutions
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NAME:_____

P.I. A2.A.25: Solve quadratic equations, using the quadratic formula

1. Explain how to use the quadratic formula to solve a quadratic equation. Include an example.

2. Write the keystrokes you can use to find one solution of $x^2 + 2x - 5 = 0$ using the quadratic formula and a calculator.

3. Suppose you cannot factor $x^2 + bx + 6$ into the product of two binomials. What must be true about *b*?

4. Write two different equations that have the solutions $x = \pm\sqrt{3}$.

[1] Write an equation in the form $ax^2 + bx + c = 0$. Substitute a, b, and c in the quadratic formula and evaluate. For example, for the equation $x^2 + 2x + 1 = 0$, $a = 1$, $b = 2$, and $c = 1$. Substituting into the quadratic formula gives $\frac{-2 \pm \sqrt{2^2 - 4(1)(1)}}{2(1)} = \frac{-2}{2} = -1$.

[2] $\boxed{(}\boxed{-2}\boxed{+}\boxed{\sqrt{\ }}\boxed{(}\boxed{2}\boxed{x^2}\boxed{-}\boxed{4}\boxed{\times}\boxed{1}\boxed{\times}\boxed{-5}\boxed{)}\boxed{)}\boxed{\div}\boxed{2}\boxed{\text{ENTER}}$

[3] It cannot be $-7, -5, 5$, or 7.

[4] Answers may vary. Sample: $x^2 = 3$, $4x^2 - 7 = 5$