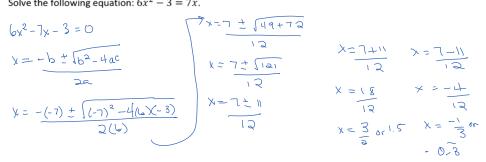
Section 7.7 - Solving Quadratic Equations Using the Quadratic Formula

- o Solving Using the Quadratic Formula
 - You can use the quadratic formula to solve any equation.
 - $x = \frac{-b \pm \sqrt{b^2 4a_0}}{2a_0}$
 - To do this, set your equation equal to zero, then sub into the equation.
 - Inadmissible solution
 - A root of a quadratic equation that doesn't actually lead to a solution that works in the original equation.
 - Always sub into your original equation to find this buggers.
 - If $b^2 4ac$ is negative, you won't actually get an answer.
 - If $b^2 4ac$ is a perfect square, you can factor it to get your answer.

7.7 Examples

1. Solve the following equation: $6x^2 - 3 = 7x$.



2. A store rents an average of 750 video games each month for \$4.50 each. The owners of the store want to raise the rates to increase the revenue to \$7000 per month. However, for every \$1 they increase, they know they rent 30 less games per month. The following relates the price, p,

and revenue, r.
$$(4.5 + p)(750 - 30p) = r$$
Can the owners increase the rental rate enough to generate revenue of \$7000?
$$(4.5 + p)(750 - 30p) = 7000$$

$$3375 + 750p - 135p - 30p^2 = 7000$$

$$- 30p^2 + 615p - 3625 = 0$$

$$- 5 - 5 - 5 - 5$$

$$(6p^3 - 123p + 7257 = 0)$$

$$(2.5 + p)(750 - 30p) = r$$

$$\times = -(-123)^{\frac{1}{2}} (-123)^{\frac{1}{2}} - 4(0)(720)^{\frac{1}{2}}$$

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(7-327) is impossible in a solution. It is impossible to generate \$7000 of revenue. P. 20 $\pm \pm 2-5$, $7 \leftarrow (a, c)$ only

THIBEAULT -> Remember to assign the table to students!