## Algebra 1 ECA Remediation Day 34

## Geometric Application of Quadratic Equations

Use quadratic equations to solve word problems that involve squares and rectangles.

## Example \#1

Solve for x .

$(x+3)(x+6)=108$
$x^{2}+6 x+3 x+18=108$
$x^{2}+9 x+18=108$
$x^{2}+9 x-90=0$
Use quadratic formula to solve:

$$
\begin{aligned}
& \mathrm{a}=1 \quad \mathrm{~b}=9 \quad \mathrm{c}=-90 \\
& x=\frac{-9 \pm \sqrt{9^{2}-4(1)(-90)}}{2(1)}
\end{aligned}
$$


$x=6$

*     - 15 is not a real solution because it would make the side lengths negative, which is impossible.

