Name _____ Date _____

Zeroing In
Solving Quadratics by Factoring

Solve each quadratic equation. Show your work.

1. $x(x + 3) - 100 = 3x$

2. $4(x + 1)^2 = 8(x + 1)$

3. The area of a rectangle is given by the quadratic equation $A = x^2 + 2x - 63$.

a. Solve the quadratic equation. Explain what the solution(s) mean(s) in terms of the problem situation.

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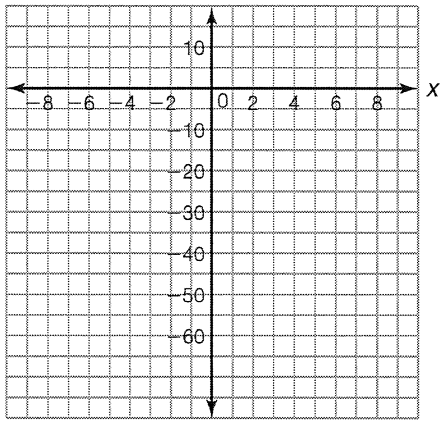
b. Graph the equation. Identify the vertex, *x*- and *y*-intercepts, and the line of symmetry. Label them on the graph and then explain what each one means in terms of the problem situation.



Vertex:

x-intercepts:

y-intercept:

Line of symmetry:

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c. Kata claims that *x* can be equal to 9. Is she correct? If so, explain why and then determine the length, width, and area of the rectangle. If not, explain why not.