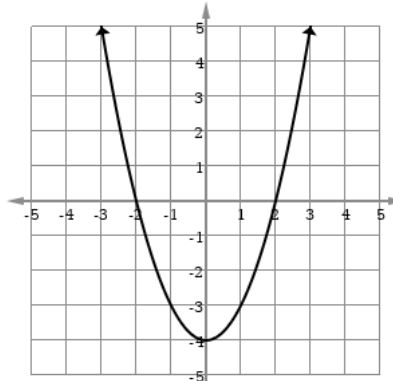


**Answer the questions completely.**

<p>1. <b>Factor</b> the expressions completely.</p> <p>A) <math>9x^2 - 27x</math></p> <p>B) <math>x^2 - 169</math></p> <p>C) <math>x^2 - x - 12</math></p> <p>D) <math>x^2 + 2x - 24</math></p>	<p>2. <math>y = (x - 2)(3x + 4)</math></p> <p>A) <b>State</b> the zeroes of the function.</p> <p>B) <b>Convert</b> to standard form.</p> <p>C) <b>State</b> the y-intercept.</p>
<p>3. <b>Find</b> the zero(s) of the function shown.</p> 	<p>4. <math>f(x) = x^2 - 4x - 12</math></p> <p>A. <b>Factor</b> the function completely.</p> <p>B. <b>Find</b> the zero(s).</p>
<p>5. <math>3x^2 + 10x - 6 = 2</math></p> <p>A) <b>Factor</b> completely.</p> <p>B) <b>Solve</b>.</p>	<p>6. <math>y = 2(x - 4)^2 - 1</math></p> <p>A) <b>State</b> the vertex.</p> <p>B) <b>Convert</b> to standard form.</p>
<p>7. <math>y = 3x^2 - 2x - 1</math></p> <p>A) <b>Solve</b> by using the Quadratic Formula.</p>	<p>8. <math>y = 2x^2 - 24x + 3</math></p> <p>A) <b>Convert</b> to vertex form by completing the square.</p>

Part B: The Quadratic Formula [A-REI.4b]

Answer the questions completely.

9.  $0 = 2x^2 - 6x - 3$

A) **Solve** algebraically, showing your work.

B) **Justify** the method you selected.

10. Using the discriminant, **select** the number of solutions. Make sure to show your work.

$$3x^2 - 12x - 8 = 0$$

(**Circle One**)

A) No real solutions

B) 1 real solution

C) 2 real solutions

Part C: Modeling with Quadratics [A-SSE.3a, A-SSE.3b]

Answer the questions completely.

11. You are designing a rectangular section of grass in your back yard. You want the length to be 6 feet more than the width. You have 55 square feet of grass to use.

A. **Draw** a picture of the situation.

B. **Write** an equation to represent the situation in terms of  $x$ , the width of the section of grass.

C. **Solve** the equation.

D. **State** the solution(s) in the context of the problem.