Name: _____ Date: _____

Given an equation in standard form, another method to solve is the quadratic formula.

Learning Goal 4.1	Given a quadratic equation, identify the number of solutions, zeros, roots or $x-$ intercepts.

Example Use the discriminant to determine the nature of the roots for each quadratic equation, then solve.

a. $3x^2 + 4x + \frac{4}{3} = 0$

b. $2x^2 - 8x = -9$

Learning Goal 4.2	Given a quadratic equation, find the values of solution(s) by factoring, completing the square or using the quadratic formula.

Example Determine the roots for each equation. Express exact answers.

a. $\frac{t^2}{4} - t - \frac{5}{2} = 0$

b. $3x^2 + 5x - 2 = 0$

Example Solve $6x^2 - 14x + 8 = 0$ by factoring, completing the square and by the quadratic formula.