Name _____ Date _____

## 3.4 Practice A

**In Exercises 1–8, solve the equation using the Quadratic Formula.**

**1.** $x^2 + 9x + 4 = 0$

**2.** $2x^2 - 2x - 4 = 0$

**3.** $2x^2 + 12x + 18 = 0$

**4.** $-4x^2 = 3x - 1$

**5.** $-3x^2 + 5x = 4$

**6.** $x^2 + 144 = 24x$

**7.** $-7x = 2x^2 + 9$

**8.** $6x^2 = 4x - 9$

**In Exercises 9–12, find the discriminant of the quadratic equation and describe the number and type of solutions of the equation.**

**9.** $x^2 - 4x + 1 = 0$

**10.** $x^2 + 10x + 25 = 0$

**11.** $3t^2 - 3t + 18 = 0$

**12.** $-x^2 - 2x + 3 = 0$

**In Exercises 13 and 14, use the Quadratic Formula to write a quadratic equation that has the given solutions.**

**13.** $x = \dfrac{9 \pm \sqrt{-79}}{8}$

**14.** $x = \dfrac{-11 \pm \sqrt{97}}{-6}$

**In Exercises 15 - 18, solve the quadratic equation using the Quadratic Formula. Then solve the equation using another method. Which method do you prefer? Explain.**

**15.** $9x^2 + 4 = 12x$

**16.** $4x^2 - 13x + 3 = 0$

**17.** $x^2 - 12x + 9 = 0$

**18.** $x^2 - 4x = 12$