

CHAPTER 8 DISCUSSION LAB

Directions: In order for your discussion lab to be accepted for grading it must be saved in the correct format and named properly. Refer to your Course Addendum, available at class.daytonastate.edu, for more details.

Problem 1

Consider the equation $x^2 - 6x - 40 = 0$. Make sure to show your work for each part.

- Solve the equation by factoring and using the Zero Product Rule.
- Solve the equation by completing the square and applying the Square Root Principle.
- Solve the equation using the Quadratic Formula.

Problem 2

- a) State the portion of the Quadratic Formula known as the Discriminant.
- b) Fill in the chart for the number and type of solutions (Real or Complex) that correspond to the discriminant of a quadratic equation.

Discriminant	Number and Type of Solutions
Positive	
Zero	
Negative	

Problem 3

For each of the following equations, show that the given value of x is a solution of the equation by direct substitution.

a) $x = \frac{4}{3}$, Equation: $3x^2 + 5x - 12 = 0$

b) $x = 1 + \sqrt{6}$, Equation: $x^2 - 2x - 5 = 0$

c) $x = 1 + 2i$, Equation: $x^2 - 2x + 5 = 0$