

NAME: \_\_\_\_\_ Score \_\_\_\_\_/10

Please **print** your name**SHOW ALL YOUR WORK IN A NEAT AND ORGANIZED FASHION****(1 points)**

1. T F If both sides of an equation are multiplied by  $3x$ , the resulting equation is equivalent to the original.

**(1 points)**

2. T F The conjugate of a complex number is a real number.

3. **(2 points)** List five numbers which are in the interval  $(0, 1]$ .

4. **(2 points)** Which of the following are rational numbers? **Circle your answers.**

4       $\frac{4}{5}$        $\frac{\sqrt{4}}{5}$        $\frac{4}{\sqrt{5}}$       3.14       $\pi$        $\sqrt{2}$

5. **(2 points)** What is the length of the line segment joining the points  $(3, -2)$  and  $(1, 5)$ ? **State the formula you intend to use before you use it, use the = symbol everywhere it is appropriate, show your work, and give an exact answer not an approximation.**

6. **(2 points)** Compute the product  $(5 + 3i)(-2 + 5i)$