

## Algebra 2: Homework 1

In 1 – 4, tell whether each statement is true or false. Explain your answer.

1. Every nonterminating decimal is irrational.
2. If  $p$  and  $q$  are integers, then  $\frac{p}{q}$  is a rational number.
3. Every whole number is rational.
4. The smallest natural number is 0.
5. Which, if any, of the following numbers are equivalent? Explain your answer.

$$\frac{22}{7}$$

$$3.14$$

$$3.\overline{14}$$

$$\pi$$

6. Solve for  $x$ :  $4x - 17 = 8x + 3$
7. Solve for  $x$ :  $x^2 + 6x + 5 = 0$
8. Factor:  $x^2 - 25$