

**7-1 Zero and Negative Exponents**

Simplify each expression completely. Leave your answer in fraction form, if necessary. (1 pt each)

1.  $y^{-3}$

2.  $x^0$

3.  $4t^{-2}$

4.  $\frac{2}{y^{-5}}$

5.  $\frac{3^{-2}}{w}$

6.  $2^{-4}x^2y^{-5}$

8. Suppose the population of a certain type of fox in Yellowstone National Park increases by 5% every year. This is modeled by the expression  $P = 500(1.05)^y$ , where  $y$  is the number of years **since 2010**.

a. About how many foxes are predicted in the year 2020?

(2)

b. About how many foxes were there in the year 2000?

(2)