

Name: \_\_\_\_\_

Suppose a tank holds 1000 gallons of water that will drain from the bottom of the tank in 10 minutes. The volume of the water,  $v$ , remaining in the tank after  $t$  minutes can be modeled by:

$$V(t) = 1000 \left( 1 - \frac{t}{10} \right)^2$$

(a) What is the domain for  $v$ ? Explain.

(b) What is the range for  $v$ ? Explain.