

**Quiz 5**  
November 20, 2002

Name \_\_\_\_\_

1. Let  $D(r)$  be the time in years that it takes for an investment to double if interest is continuously compounded at an annual rate of  $r\%$ . (Note:  $r$  is expressed here in percents not decimals)

(a) What are the units of  $\frac{dD}{dr}$ ?

(b) Why does it make sense that  $\frac{dD}{dr}$  is always negative?

(c) Give the english sentence (or sentences) that interprets the following statement:

$$\frac{dD}{dr} = -2.77 \quad \text{when} \quad r = 5$$

2. Sketch a slope graph of the following function graph on the set of axes given on the next page.



