

**13.** (10 pts) In the late 1970's, complex political pressures caused the price of refined gold to rise sharply. Let  $t$  be the time in years since 1900, and let  $H$  be the worldwide gold holdings (the total amount of gold worldwide), in *tons*. At  $t = 79$ , the world economy held 26,000 tons of gold. This quantity was steadily growing at approximately 500 tons per year.

Also, let  $P$  be the market price of gold in *millions of dollars per ton*. For times near 1979, the price  $P$  of gold was approximately:

$$P = 9.9 + 11(t - 79)$$

**a)** (2 pts) How fast was the price of gold rising in 1979?

**b)** (2 pts) Let  $V$  be the dollar value of all the gold in the world. Calculate  $V$  in 1979. Include units in your answer.

**c)** (6 pts) How fast was  $V$  changing in 1979? Answer in a meaningful sentence, with units.