

Math 229  
Tax Code Problem  
06/05/2008

Suppose a certain county assess property tax on residential property as follows:

- (a) Property worth \$50,000 or less is taxed a flat rate of \$500 per year.
- (b) Property worth more than \$50,000 but less than \$200,000 is taxed \$500 plus 3% of the amount that its value exceeds \$50,000.
- (c) Property worth \$200,000 or more is taxed \$5000 plus 5% of the amount that its value exceeds \$200,000.

1. Find the annual property tax on a property worth \$40,000

2. Find the annual property tax on a property worth \$75,000

3. Find the annual property tax on a property worth \$500,000

4. Find a function  $T(x)$  that models property tax for any residential property in this county.