THE TANGENT LINE

1. Determine the slope of the tangent line to $f(x) = 2x^2 + 1$ at the point $P(1, 3)$.

x	m_{PQ}
2	
1.5	
1.1	
1.01	
↓	↓
1	
↑	↑
0.99	
0.9	
0.5	
0	

2. Estimate the slope of the tangent line at the point $P(80, 200)$ by using the graph below.

$h(x)$
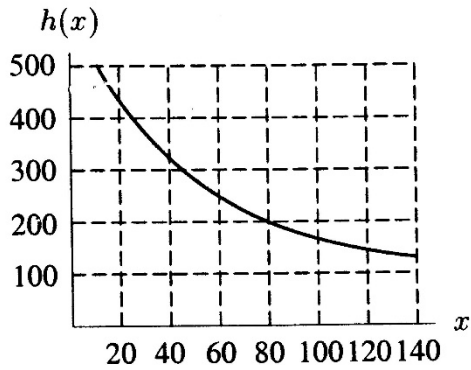
3. The table below gives the percentage of household in the U.S. with a microwave oven. Use secant lines to estimate the annual percentage growth in the year 1982.

Year	1978	1980	1982	1984	1987	1990
% of households with microwaves	8	14	21	34	61	69