

Math 111 Quiz #1 Answers

1. (a) i. 1
ii. 3

(b) $x = 1, x = 3, x = 5$

2. Average rate of change = $\frac{g(3)-g(-1)}{3-(-1)} = \frac{21-5}{4} = 4$

3. (a) $P = f(t) = 3t + 52$ (in thousands) since the initial value is 52 thousand and the rate of change of the population is 3 thousand people/year.

(b) The population in 2020 ($t=20$) is given by $f(20) = 3(20) + 52 = 112$ thousand people.

4. Pt.-Slope Form: $y + 1 = 5(x - 2)$

Slope-Intercept Form: $y = 5x - 11$ (Either answer is fine.)