Sols

Math 122 Quiz 2: Sections 1.1-1.3

Name: _____

1. Consider the function given by $f(x) = x^2 + 1$. Find the difference quotient (average rate of change) between $x = 1$ and $x = 4$.

$$\frac{f(4) - f(1)}{4 - 1} = \frac{(4)^2 + 1 - ((1)^2 + 1)}{3}$$

$$= \frac{16 + 1 - 2}{3}$$

$$= \frac{15}{3}$$

$$= 5$$

2. On January 27, 2013, the cost to mail a letter in the US was raised from 45 cents to 46 cents. Find the relative change in cost.

$$\frac{P' - P}{P} = \frac{46 - 45}{45} = \frac{1}{45}$$