Name: _____ Date: _____

1. Find the rate of change of Pete's height from 3 to 5 years.

Time (years)	1	2	3	4	5	6
Height(in.)	27	35	37	42	45	49

2. For $f(x) = -6x - 2$, find the rate of change when $x_1 = -2$ and $x_2 = 4$?

3. You and a friend are trying to decide which theater to go to for a Friday night movie. AMC charges $7 for the movie ticket and $3 per food item. Regal's prices are represented by the table.

Write an equation for AMC and Regal. Compare their rates of change and initial cost.

x	f(x)
0	4
1	8
2	12
3	16
4	20

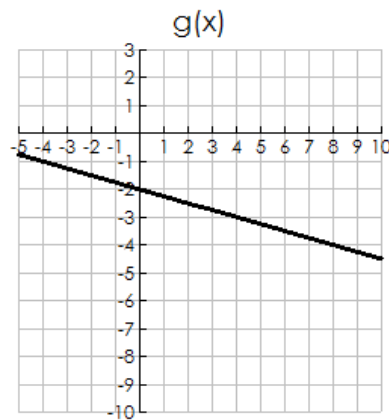   **AMC:**   **Regal:**

What is the rate of change (slope) for each theater price? What does this rate of change represent?

How does rate of change help you decide which is cheaper for a person seeing one movie and planning to buy a drink and a popcorn?

4. For the following two functions, complete the chart to compare them.

g(x)

x	f(x)
-3	11
-1	7
0	5
1	3
3	-1
5	-5

y-intercept of f(x): (_____, _____)	y-intercept of g(x): (_____, _____)
Rate of Change of f(x):	Rate of Change of g(x):
equation:	equation:
f(4) =	g(-8)=