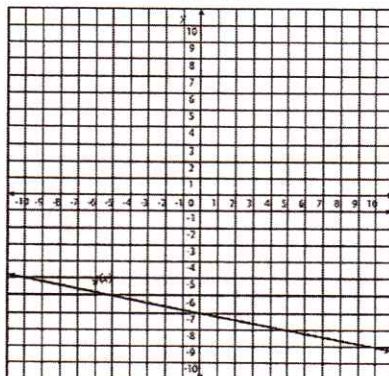


1. Which function has the greater slope? Which function has the greater y-intercept?

Function A

x	f(x)
-8	1
0	2
4	2.5
8	3

Function B

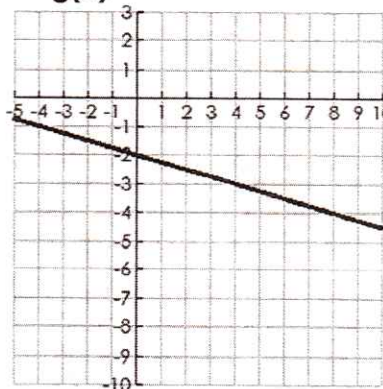


2. For the following two functions, write the equations of each and complete the chart using $<$, $>$, or $=$ to compare them.

f(x) =

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

g(x) =



Characteristic of f(x)	$<$, $>$, or $=$	Characteristic of g(x)
y-intercept of f(x)		y-intercept of g(x)
f(4)		g(4)
Rate of Change of f(x)		Rate of Change of g(x)

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

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

a. Write an equation for NCG and Regal. Compare their slopes and initial cost.

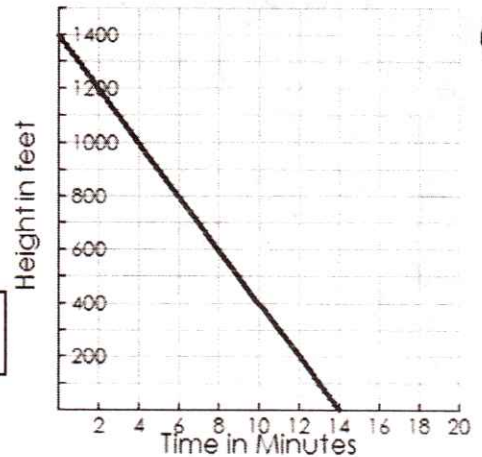
NCG:

Regal:

b. Which theater is cheaper if you want to see the movie and also get a drink and popcorn?

4. Two helicopters are headed toward a landing spot. Hank's helicopter is currently at an altitude of 1250 feet and approaching the ground at a rate of 75 feet per minute. Bill's helicopter is approaching the ground at a rate illustrated by the graph.

Bill's Helicopter



a. Write an equation for both helicopters.

Hank:

Bill:

b. Which helicopter is descending faster?

c. Which helicopter will land first? How long will it take?

5. Answer the following questions about the functions:

Function A

A local newspaper began with a circulation of 1,300 readers in its first year. Since then, its circulation has increased by 150 readers per year.

Function B

The function $g(x) = 225x + 950$ represents the circulation of another newspaper where $g(x)$ represents total subscriptions and x represents the number of years since its first year.

a. Which function has the larger rate of change? Explain why.

b. Which function has the higher starting amount? Explain why.

6. Answer the following questions about the functions:

Function A

A rental store charges \$40 to rent a steam cleaner, plus an additional \$4 per hour.

Function B

The table below shows the total cost in dollars to rent a steam cleaner at a different rental store. $g(x)$ represents the total cost after x hours.

Hours (x)	Total cost ($g(x)$)
3	46
4	53
5	60
6	67

a. Which function charges more per hour? Explain why.

b. Which function has the higher rental fee? Explain why.