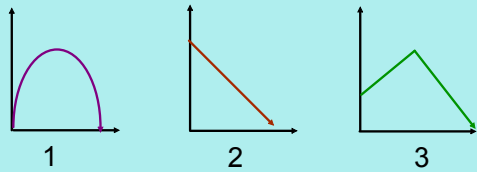


Journal Entry:

Which is a linear function? How do you know?



Section 4-3
Patterns and Nonlinear Functions

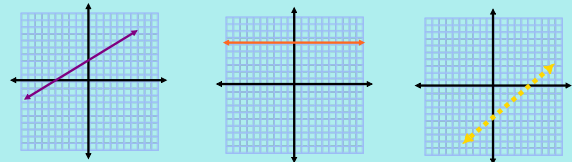
Students will be able to identify and represent patterns that describe nonlinear functions.

Solve It, Getting Ready: pg. 246

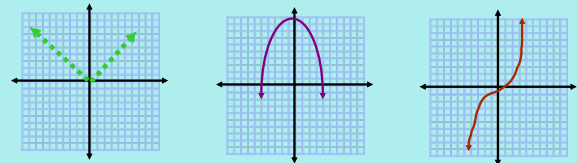
Handwritten notes showing a sequence of numbers and their differences:

1	1	>	+2
2	3	>	+3
3	6	>	+4
4	10	>	+5
5	15	>	+6

Linear Functions:



Nonlinear Functions:



Make a table that shows how much of the original area of a piece of paper has after cutting n times. Is the function linear? No

Cut #	area resulting	not adder Sub Same amount each time.
0	1	
1	1/2	
2	1/4	
3	1/8	

With your same partner, do the Got It problem on page 248.

Handwritten notes showing a table of powers of 3 and a graph of the exponential function $y = 3^x$.

30+	.1	2	3	4	5	
25+						
20+		3	9	27	81	243
15+						
10+						
5+						

Graph of $y = 3^x$ with points (1, 3), (2, 9), (3, 27), (4, 81).

A function can be thought of as a rule that you apply to the input in order to get the output.

What is a rule for the function represented by the ordered pairs (1, 1), (2, 4), (3, 9), (4, 16)?

$y = x^2$
 check it $4 \stackrel{?}{=} 2^2 \checkmark$ $9 = 3^2 \checkmark$

What rule represents the function?

(0, 0), (1, 1), (2, 8), (3, 27), (4, 64)

0·0·0 1·1·1 2·2·2 3·3·3 4·4·4

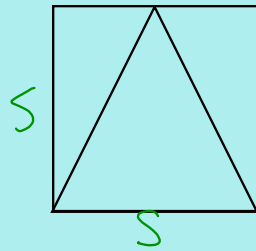
$y = x^3$

A landscape architect wants to make a triangular garden inside a square of land. What is the rule for the area A of the garden as a function of s ?

$A = \frac{1}{2}bh$

$A = \frac{1}{2}s \cdot s$

$A = \frac{1}{2}s^2$



Hwk:

pg. 250 - 252

#6 - 22 evens, 23 - 25 all