

6.3 Understanding Linear Functions Day 1

TSW identify _____ and nonlinear functions by analyzing tables and graphs

Vocabulary

Linear Function

Rate of Change

You can find tell whether a function is linear by finding the rate of change, as shown below:

Examples of Linear Functions

a)

		+2	+2	+2	+2	
		↘	↘	↘	↘	
x	1	3	5	7	9	
y	12	18	24	30	36	
		↖	↖	↖	↖	
		+6	+6	+6	+6	

b)

		+1	+2	+3	+1	
		↘	↘	↘	↘	
x	1	2	4	7	8	
y	18	12	0	-18	-24	
		↖	↖	↖	↖	
		-6	-12	-18	-6	

Examples of Non-Linear Functions

c)

		+1	+2	+3	+1	
x	1	2	4	7	8	
y	1	4	16	49	64	
		+3	+12	+33	+15	

Math Note

A function with a varying rates of change is nonlinear.

Example 7 Tell whether a function represented in a table is linear.

The table shows the cooking times recommended for roasting turkeys of different weights. Tell whether the relation between the weight of a turkey, x pounds, and the time it takes to roast the turkey, t hours, is a linear function.

Weight of Turkey (x pounds)	10	15	20	30
Time Taken (t hours)	3.0	3.5	4.0	5.0