Section 7.4: Comparing Linear and Non-Linear Functions   Name: _____
In Class Notes

A graph of a _____ shows a constant rate of change.

A _____ does not have a constant rate of change. So, it's graph is *not* a

line.

Identifying Functions From Tables
Ex:) Does each table represent a linear function or non-linear function?   Notes:
Explain.

A.

x	3	6	9	12
y	40	32	24	16

B.

x	1	3	5	7
y	2	11	33	88

OYO:) Does each table represent a linear function or non-linear function?   Notes:
Explain.

A.

x	2	4	6	8
y	−8	−4	0	4

B.

x	0	3	7	12
y	25	20	15	10

Identifying Functions From Equations

Ex:) Does each equation represent a linear or non-linear function? Explain.   Notes:

A. $y = 4(x-1)$

B. $y = \dfrac{4}{x}$

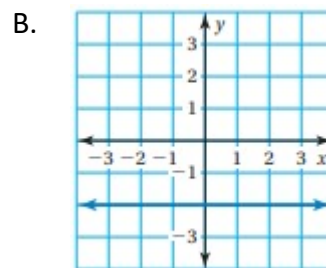OYO:) Does each equation represent a linear or non-linear function? Explain.   Notes:
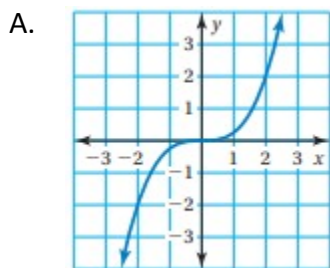
A. $y = 1 - x^2$

B. $y = \dfrac{4x}{3}$

Identifying Functions From Graphs

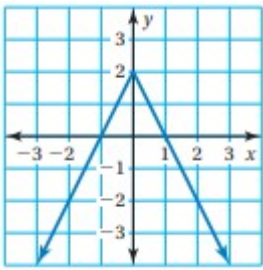Ex:) Does each graph represent a linear or non-linear function? Explain.   Notes:
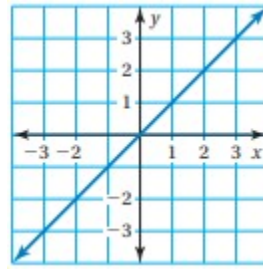
A.

B.

OYO:)Does each graph represent a linear or non-linear function? Explain.   Notes:
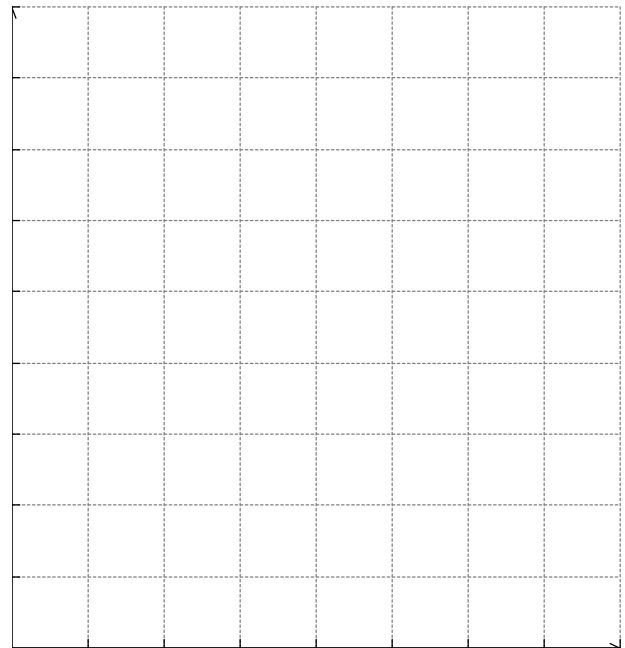
A.

B.

Modeling Real Life

Ex:) Two accounts earn different types of interest. The table shows the   Notes:
balances of each account for five years. Graph the data and compare the
balances of the accounts over time.

Year, t	Account A Balance	Account B Balance
0	$100	$100
1	$110	$110
2	$120	$121
3	$130	$133.10
4	$140	$146.41
5	$150	$161.05

OYO:) The loudness of sound is measured in decibels (dB). The graph shows the loudness y of a sound (in decibels) x meters from the source of the sound. Is the relationship between loudness and distance linear or non-linear? Approximate the loudness of the sound 12 meters from the source.

Loudness of Sound