

5.6

Properties of Linear Relations

Lesson 9

Practice

EXAMPLE 1

Identify a Linear Relation

Which relation is linear?

Time (years)	Value (\$)
0	24 000
1	20 400
2	17 340
3	14 739

Time (h)	Cost (\$)
0	75
1	125
2	175
3	225
4	275

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Practice

EXAMPLE 1

Identify a Linear Relation

Which relation is linear?

s (km/h)	d (m)
50	13
60	20
70	27
80	35

not linear

t (min)	a (m)
0	12 000
2	11 600
4	11 200
6	10 800
8	10 400

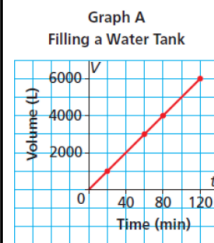
Linear

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Practice

EXAMPLE 2

Determining Rate of Change of a linear Relation from its graph.



- a) Determine the independent variable
time (t)
- b) Determine the dependent variable
Volume (L)
- c) Determine the rate or change
 $\frac{\Delta y}{\Delta x} = \frac{2000}{40} = 50$ or $\frac{50}{1} \rightarrow$
- d) Determine the constant
 $y = mx + b \Rightarrow 0$
0
- e) Write the equation of the line

$L = 50t + 0$
 $L = 50t$

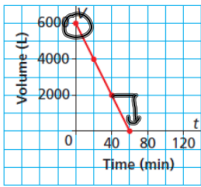
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Practice

EXAMPLE 3

Determining Rate of Change of a linear Relation from its graph.

Graph B
Emptying a Water Tank



a) Determine the independent variable

t (time)

b) Determine the dependent variable

L (Volume)

c) Determine the rate or change

$$\frac{-2000}{20} = -100$$

d) Determine the constant

6000

e) Write the equation of the line

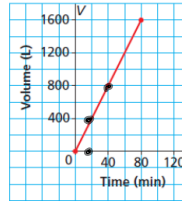
$$L = -100t + 6000$$

Practice

YOU TRY!

Determining Rate of Change of a linear Relation from its graph.

Graph A
Filling a Hot Tub



a) Determine the independent variable

t

b) Determine the dependent variable

L

c) Determine the rate or change

$$\frac{400}{20} = 20$$

d) Determine the constant

0

e) Write the equation of the line

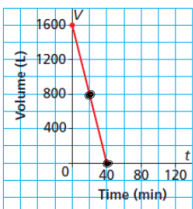
$$L = 20t$$

Practice

YOU TRY!

Determining Rate of Change of a linear Relation from its graph.

Graph B
Emptying a Hot Tub



a) Determine the independent variable

t

b) Determine the dependent variable

L

c) Determine the rate or change

$$\frac{-800}{20} = -40$$

d) Determine the constant

1600

e) Write the equation of the line

$$L = -40t + 1600$$

Practice

HOMEWORK!

Textbook Questions:

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