Assignment Page M2-253 - LESSON 5: Comparing Apples to Oranges Name Key Per **A B C D E F**

PRACTICE

1) Find the rate of change for each relation. Then rank them in order from **least to greatest**.

a)

+5 +5 +5

x	0	5	10	15
y	1	9	17	25

+8 +8 +8

$\frac{\Delta y}{\Delta x} = \frac{8}{5}$

m = $\frac{8}{5}$ = 1.6

b) y = 1.5x + 2

m = 1.5 = 1.5

c) The output of a function is three times the input

y=3x

m = 3 = 3

d) (-2, 4), (2, -1), (6, -6)

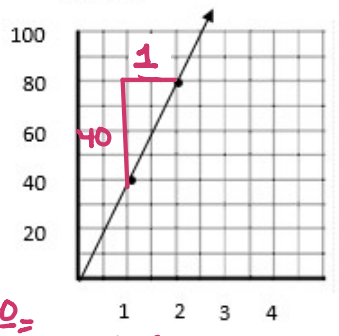
$m = \frac{-1-4}{2-(-2)} = \frac{-5}{4}$

m = $\frac{-5}{4}$ = 1.25

Rank (least to greatest): D, B, A, C.

2). Find the rate of change for each car below. Then rank them in order from **least to greatest**.

Car A:



$\frac{40}{1}$ =

m = 40mph

Car B:

y = 45x

m = 45mph

Car C:

(3, 50), (6, 170)

$\frac{170-50}{6-3} = \frac{120}{3} = 40$

m = 40mph

Car D:

x	y
2	60
5	150
10	300

(2,60)
(5,150)

$m = \frac{150-60}{5-2} \quad \frac{90}{3} = 30$

m = 30mph

Rank (least to greatest): D, A, C, B.

same rate of change

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3) Shawna is looking for a pet sitting company for her dog. She found four companies and would like to find the **rate** for each:

(a) ***Beautiful Fur Babies***:

$y = 5 + 3x$

m = $3/hr

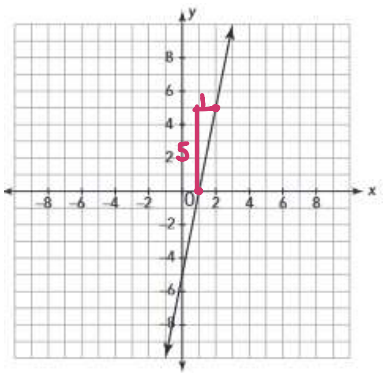
(b) ***Darling Divas***:

charges $2.75 per hour

$y = 2.75x$

m = $2.75/hr

(c) ***Absolutely Perfect Pets***:



m = $5/hr

(d) ***Cozy Critters***:

Hours	Cost ($)
2	7
4	14
6	21
8	28

$m = \frac{7}{2} = 3.50$

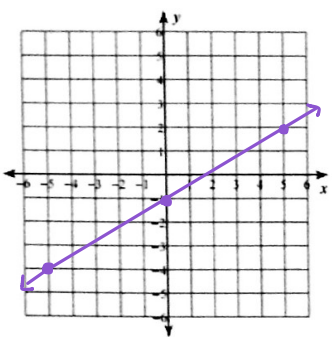
m = $3.50/hr.

Order the business by rate of change (least to greatest)

1ST Darling Divas $2.75 2ND Beautiful Fur Babies $3.00 3RD Cozy Critters $3.50 4TH Absolutely Perfect Pets $5.00

REVIEW

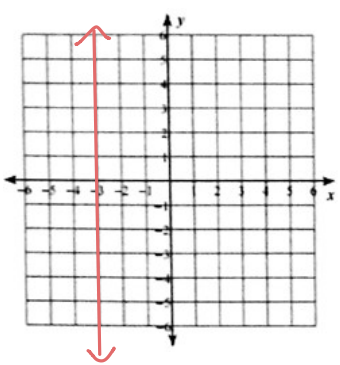
4) Identify the slope and y-intercept of this equation, and graph it.



$y = \frac{3}{5}x - 1$

m= $\frac{3}{5}$

b= -1



x = -3

m = undefined

b = none

Function: Yes (No)

Reason: does not pass vertical line test