

1. Which function has the greatest rate of change?

ROC A: $\frac{1}{2}$

ROC B: $\frac{1}{5}$

(A) $\frac{1}{2} > \frac{1}{5}$

Rate of Change:

Slope

(m) $\frac{\text{Rise}}{\text{Run}}$

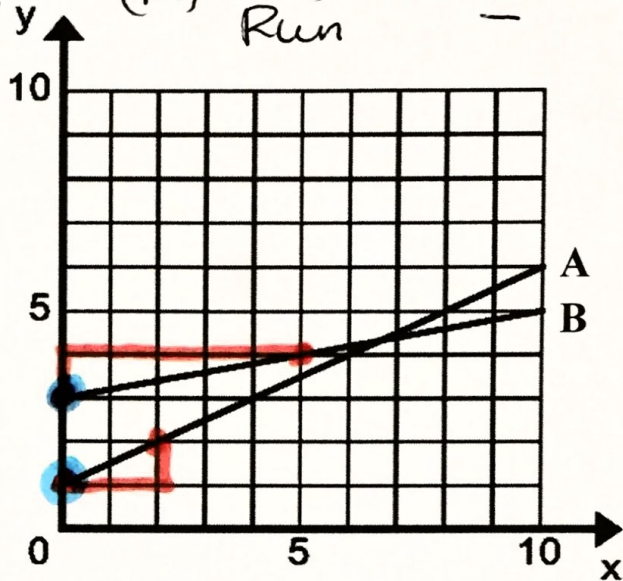
2. Which function has the least initial value?

IV A: 1

IV B: 3

(A)

$1 < 3$



Initial value:

(b) Starting amount
y-int when $x=0$

3. Which function has the greatest rate of change?

ROC A: $\frac{2}{5}$

ROC B: $\frac{4}{3}$

(B) $\frac{2}{5} < \frac{4}{3}$

4. Which function has the greatest initial value?

Function B

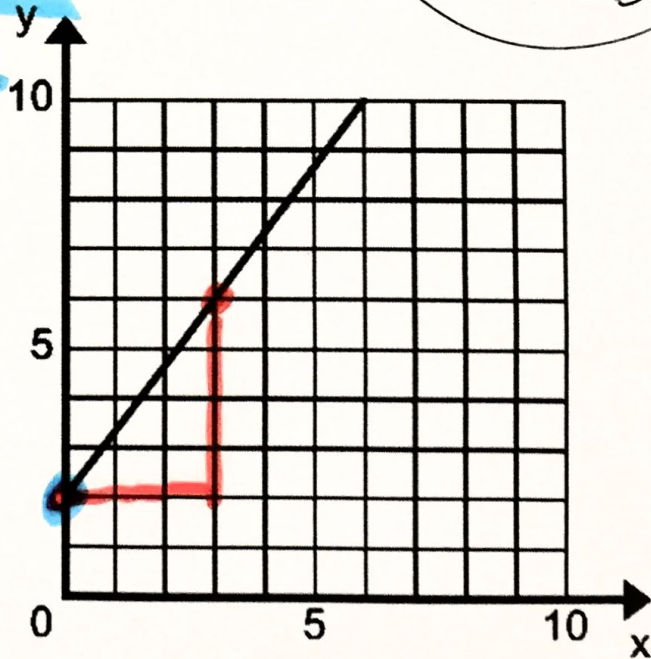
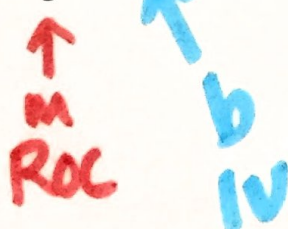
IVA: 5

IVB: 2

Function A

A $5 > 2$

$y = \frac{2}{5}x + 5$



Notes 3-6

Int 2

Compare Properties of Functions

Unit 3

5. Which function has the least rate of change?

ROC A: 2

ROC B: $\frac{3}{4}$

B $2 > \frac{3}{4}$

6. Which function has the greatest initial value?

IV A: 10

IV B: 8

A $10 > 8$

Function A

x	-4	0	4	8
y	2	10	18	26

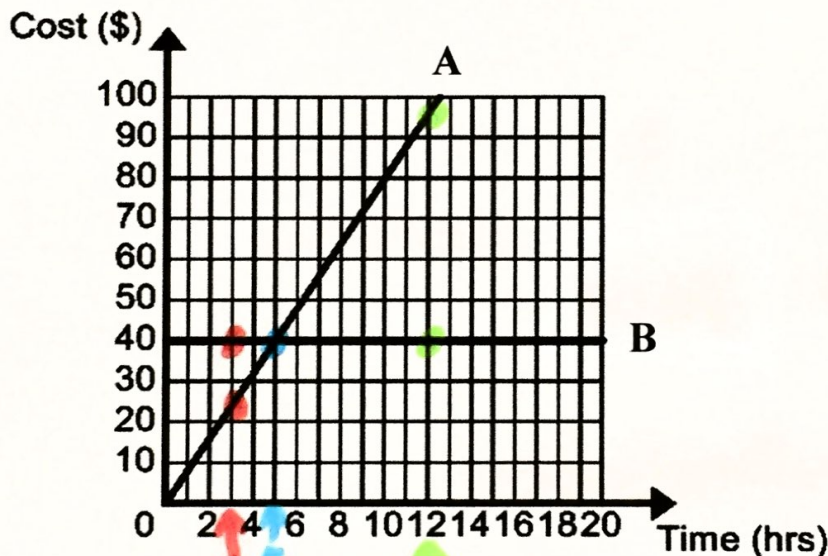
Function B

$y = \frac{3}{4}x + 8$

$\frac{2 - 10}{-4 - 0} = \frac{-8}{-4} = 2$



You go to Lagoon on a hot summer day and discover they offer two different pricing options represented on the graph below.



7. Which situation costs less after 3 hours?

A

8. Which situation costs less after 5 hours?

same

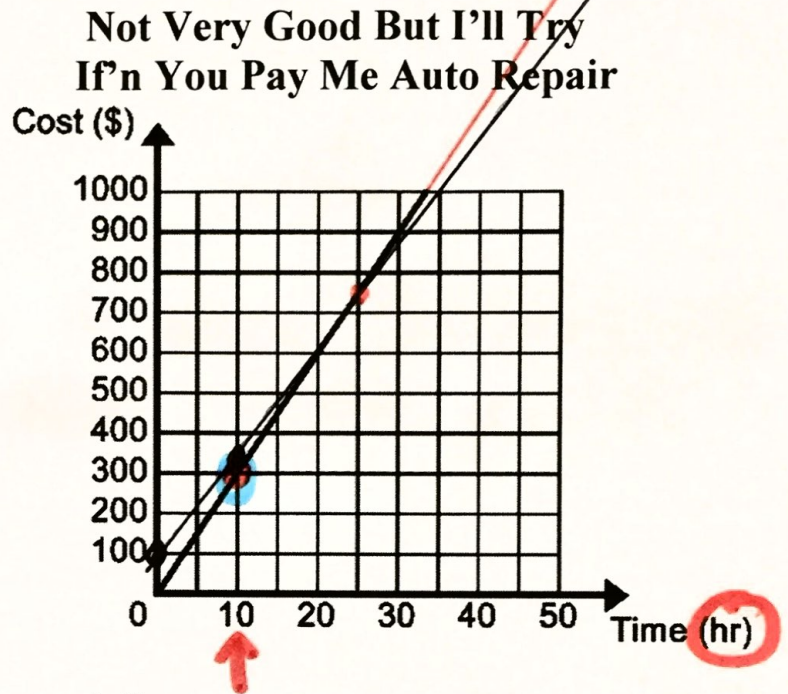
9. Which situation costs less after 12 hours?

B

You've got to pay a mechanic to get your motorcycle fixed and there are two mechanics in town. Their prices are represented below where x is the number of hours it takes and y is the cost.

Costs a Lot Auto Repair

$$y = 25x + 100$$



10. Which shop costs less for a 10 hour repair?

CAL $\Rightarrow y = 25x + 100$
 $25(10) + 100 = \$350$
 $250 + 100$

NVG = \$300

11. Which shop costs less for a 50 hour repair?

CAL $\Rightarrow y = 25x + 100$
 $25(50) + 100 = \$1350$
 $1250 + 100 = \$1350$

NVG(300)5 = 1500

12. Which shop costs less for a 20 hour repair?

CAL $y = 25(20) + 100$
 $500 + 100$
 600

NVG = 600

Same

Notes 3-6

Candy bars are on sale at two different stores. The prices are represented in the tables below where x is the number of candy bars and y is the cost in dollars.

We Sell Sweets

x	0	2	5	10
y	0	0.66	1.65	3.30

Ur Gonna Rot Yer Teeth Out

x	0	1	2	3
y	0	0.40	0.80	1.20

$$\frac{1.65 - 0.66}{5 - 2} = \frac{.99}{3}$$

13. Which store has the best deal if you want to buy four candy bars?

We Sell Sweets → ROC: \$0.33 per cb
 UGRYTO → ROC: \$0.40 per cb

14. Which store has the best deal if you want to buy twenty candy bars?

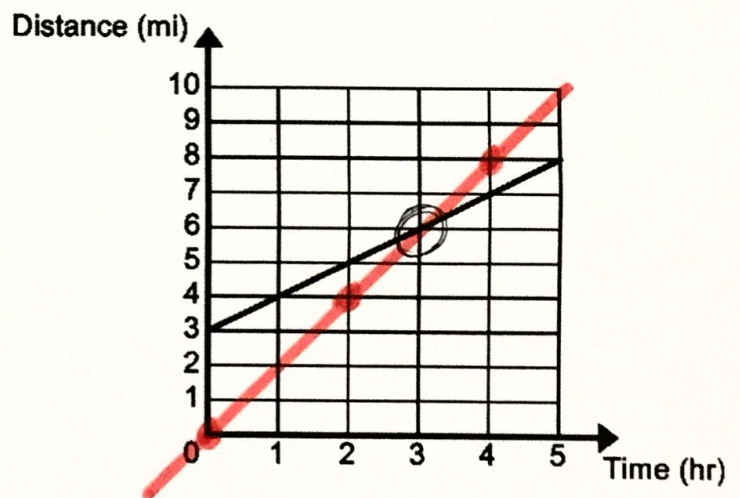
WSS

You and your friend start walking but your friend has a 3 mile head start. How long does it take you to catch up to your friend if x is the number of hours you've walked and y is the number of miles?

You

x	0	2	4	6
y	0	4	8	12

Your friend



15. How long will it take you to catch up to your friend?

3 hrs