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PRACTICE

1) Great Freights, a local shipping company, charges on the weight being shipped. The company charges ***$0.40 per pound*** and a one-time fee of ***$10*** to set up a customer's account.

a. How much does Great Freights charge if a package weighs 20 pounds? (Show work)

$0.40(20) + 10 = \boxed{\$18}$

$8 + 10$

b. How much does Great Freights charge if a package weighs 50 pounds? (Show work)

$0.40(50) + 10 = \boxed{\$30}$

$20 + 10$

c. If a customer paid $45 for shipping, what is the weight of a package?

$45 - 10 = 35$

$35 \div 0.40 =$

d. Define the variables and write an equation for the problem.

x represents # of pounds

y represents total cost

Equation: $y = 0.40x + 10$

2) Twin brother, Mike and Mark, are looking for winter break jobs. They are both offered jobs at grocery stores. Mike is offered a job at Fresh Foods making ***$10 per hour***.

a. How much does Mike earn if he works 20 hours? 40 hours? 60 hours?

20 hrs = $10(20) = 200$

40 hrs $10(40) = 400$

60 hrs $10(60) = 600$

b. Define the variables and write an equation to represent Mike's earning.

x represents # of hours worked

y represents Total $ earned

Equation: $y = 10x$

c. Create a table using the data from part **(a)**.

Hours worked	Earnings ($)
0	0
20	200
40	400
60	600
80	800
100	1000

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Mark is also offered a job at Groovy Groceries making ***$8 per hour***, plus a one-time bonus of ***$100***.

d. How much does Mark earn if he works 20 hours? 40 hours? 60 hours?

20 hrs: 8(20)+100, 160+100, $260

40 hours: 8(40)+100, 320+100, $420

60 hours: 8(60)+100, 480+100, $580

e. Define the variables and write an equation to represent Mark's earning.

x represents # of hours worked

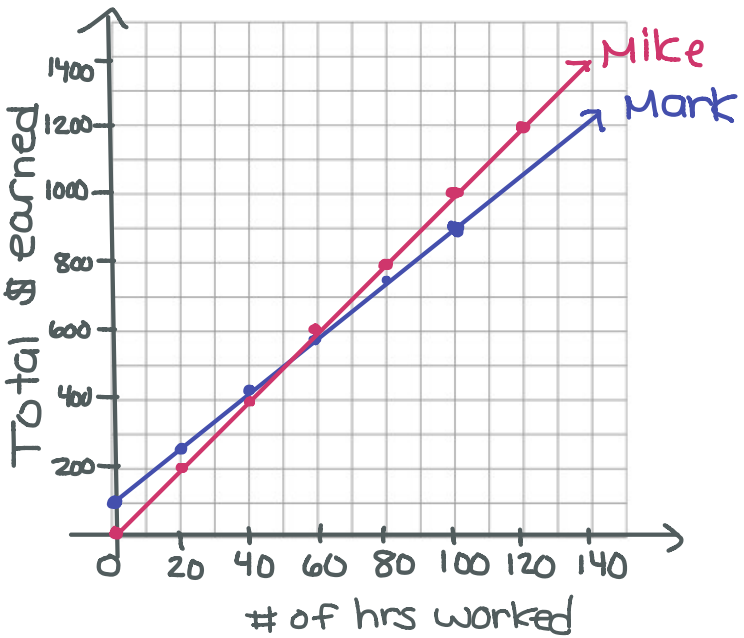
y represents Total $ earned

Equation: $y = 8x + 100$

f. Create a table using the data from part **(d)**.

Hours worked	Earnings ($)
0	100
20	260
40	420
60	580
80	740
100	900

g. Create a graph of the data in table in part **(c)** and **(f)**.



h. After how many will the Mike and Mark earn the ***same*** amount of money? Explain your reasoning.

At about 50 hours Mike & Mark earn the same amount $500

Mike: 10(50), $500

Mark: 8(50)+100, 400+100, $500

* Lines intersect at (50, 500)

i. Whose job is better? Explain your answer.

* If you work 0-50 hours mark's job is better.

* If you work more than 50 hrs Mike's is better