



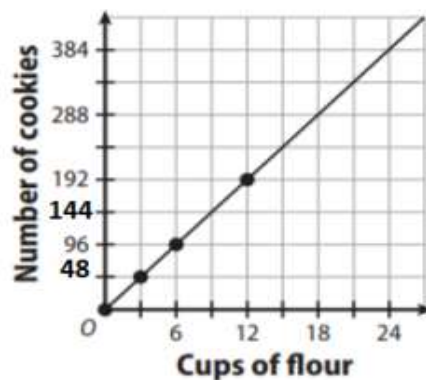
Name .....

Gr. / 8A

Subject/ Math.

Revision sheet  
**Model Answer****L.3-1 "Representing Proportional Relationships"****Q1) Solve:**

1) The graph shows the relationship between the number of cups of flour and the number of cookies made. Write an equation for the proportional relationship.

**Answer:**

Cups of flour (x)	3	6	12
Number of cookies (y)	48	96	192

$$K = y/x = 16 \quad \text{so} \quad y = 16x$$

2) The table shows a proportional relationship. Write an equation that describes the relationship.

Hours	1	2	3	4
Calories burned	225	450	675	900

**Answer:**       $k = 225$  so       $y = 225x.$

### L.3.2" Rate of Change and Slope"

#### **Q1) Chose the correct answer: -**

1)The table represents the number of computer tablets sold. Tell whether the rates of change are constant or variable.

<b>Week</b>	1	3	4	8
<b>Number sold</b>	32	96	128	224

a) Constant

b) variable

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#### **Q2) Solve:**

The table shows the prices for various electronics during a storewide sale. Each item has the same percent discount. find the slope of the line connecting the points.

<b>Item</b>	Tablet Computer	Disk Player	32-inch TV	Smart-phone
<b>Original price (\$)</b>	350	375	400	200
<b>Sale price (\$)</b>	280	300	320	160

**Answer:**  $m = \frac{300-280}{375-350} = \frac{20}{25} = \frac{4}{5}$  or 0.8

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### L.3-3 "Interpreting the Unit Rate as Slope"

1) Find the constant of proportionality for the table of values.

<b>x</b>	2	3	4	5
<b>y</b>	3	4.5	6	7.5

**Answer:**  $K = 1.5$

**Choose the correct answer: -**

1) The table represent the rate at machines A is bottling milk in gallons per second. And the equation  $y = \frac{3}{4}x$  represent the rate at machines B is bottling milk in gallons per second. Determine which machine is working at a faster rate.

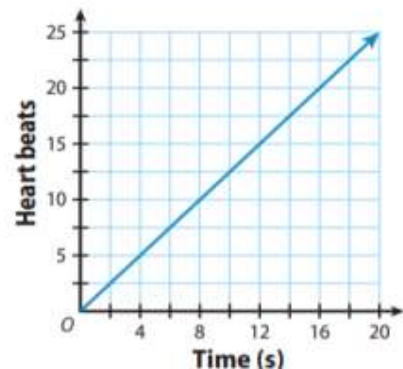
Time(s)	1	2	3
Amount(gal)	0.6	1.2	1.8

Machine B is working at a faster rate since  $0.75 > 0.6$ .

- a) machine A                      b) machine B                      c) they are the same
- 

**Q2) Solve:**

1) The equation  $y = 1.2x$  represents the rate, in beats per second, that Lee's heart beats. The graph represents the rate that Nancy's heart beats. Determine whose heart is beating at a faster rate.



**Answer: Answer:**

$1.25 > 1.2$ ; Nancy's heart is beating faster.

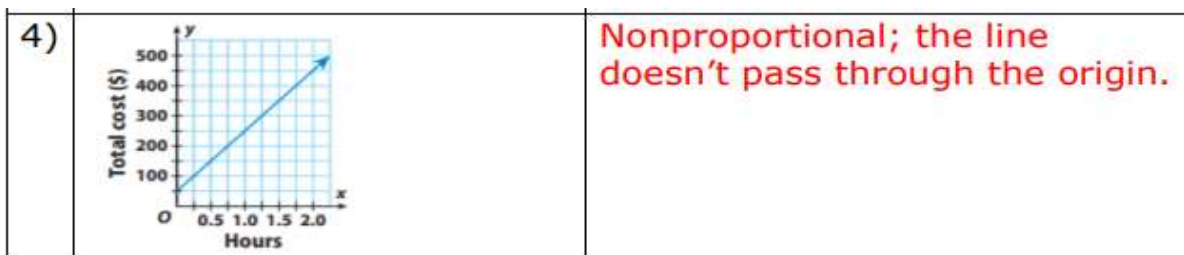
### L-4.1 "Representing linear Nonproportional relationships"

1) Does the table represent a proportional or a nonproportional linear relationship?

1)	<table border="1"> <tbody> <tr> <td>x</td> <td>0</td> <td>2</td> <td>4</td> <td>6</td> <td>8</td> </tr> <tr> <td>y</td> <td>1</td> <td>7</td> <td>13</td> <td>19</td> <td>25</td> </tr> </tbody> </table>	x	0	2	4	6	8	y	1	7	13	19	25	NonProportional ; $b \neq 0$ when $x = 0$
x	0	2	4	6	8									
y	1	7	13	19	25									
2)	<table border="1"> <tbody> <tr> <td>x</td> <td>0</td> <td>5</td> <td>10</td> <td>15</td> <td>20</td> </tr> <tr> <td>y</td> <td>140</td> <td>120</td> <td>100</td> <td>80</td> <td>60</td> </tr> </tbody> </table>	x	0	5	10	15	20	y	140	120	100	80	60	NonProportional ; $b \neq 0$ when $x = 0$
x	0	5	10	15	20									
y	140	120	100	80	60									
3)	<table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>1</td> </tr> <tr> <td>40</td> <td>8</td> </tr> <tr> <td>65</td> <td>13</td> </tr> </tbody> </table>	x	y	5	1	40	8	65	13	Proportional, it has a constant of proportionality (k)				
x	y													
5	1													
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4)	<table border="1"> <tbody> <tr> <td>x</td> <td>0</td> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td>y</td> <td>0</td> <td>4.5</td> <td>9</td> <td>13.5</td> </tr> </tbody> </table>	x	0	1	2	3	y	0	4.5	9	13.5	Proportional, it has a constant of proportionality (k)		
x	0	1	2	3										
y	0	4.5	9	13.5										

2) Does the graph represent a proportional or a nonproportional linear relationship?

1)		Proportional; the line pass through the origin.
2)	<p><b>Driving Distance</b></p>	Proportional; the line pass through the origin.
3)		Nonproportional; the line doesn't pass through the origin.



3) Which table is the values for the equation  $y = x - 1$

a)	<table border="1"> <tbody> <tr> <td>x</td> <td>-8</td> <td>0</td> <td>8</td> <td>16</td> <td>24</td> </tr> <tr> <td>y</td> <td>-8</td> <td>-5</td> <td>-2</td> <td>1</td> <td>4</td> </tr> </tbody> </table>	x	-8	0	8	16	24	y	-8	-5	-2	1	4
x	-8	0	8	16	24								
y	-8	-5	-2	1	4								
b)	<table border="1"> <tbody> <tr> <td>x</td> <td>0</td> <td>2</td> <td>4</td> <td>6</td> <td>8</td> </tr> <tr> <td>y</td> <td>3</td> <td>7</td> <td>11</td> <td>15</td> <td>19</td> </tr> </tbody> </table>	x	0	2	4	6	8	y	3	7	11	15	19
x	0	2	4	6	8								
y	3	7	11	15	19								
c)	<table border="1"> <tbody> <tr> <td>x</td> <td>-2</td> <td>-1</td> <td>0</td> <td>1</td> <td>2</td> </tr> <tr> <td>y</td> <td>-3</td> <td>-2</td> <td>-1</td> <td>0</td> <td>1</td> </tr> </tbody> </table>	x	-2	-1	0	1	2	y	-3	-2	-1	0	1
x	-2	-1	0	1	2								
y	-3	-2	-1	0	1								

4) The table shows a proportional relationship. What is the missing y-value?

x	y
5	1
40	8
65	?

$$65/5 = 13$$

a) 16                                      b) 15                                      c) 13

### L.4.2" Determining Slope and y-intercept

Q1) A large barrel that holds water is leaking. The table shows how much water is left after a specific number of minutes. Find and interpret the rate of change.

Minutes	5	10	15	20
Water (gal)	16	14	12	10

The rate of change is  $-\frac{2}{5}$ . This means that the water is leaking out at a rate of 2 gallons every 5 minutes.

Q2) Gregg deposits the money he makes from mowing lawns into his savings account, adding it to the money his father gave him to open the account. Confirm the relationship is linear and give the constant rate of change and the initial value.

Lawns mowed	5	10	15	20
Money saved (\$)	110	170	230	290

The constant rate of change is 12. The initial value is \$50.

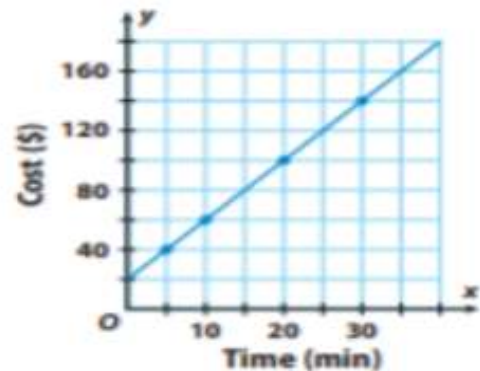
Q3) What are the slope and y-intercept of the relationship shown in the table?

x	10,000	20,000	30,000
y	2,500	3,000	3,500

slope = 0.05, y-intercept = 2,000

Q4) What are the slope and y-intercept of the relationship shown in the graph?

slope = 4, y-intercept = 20  
 $y = 4x + 20$



Q5) What are the slope and y-intercept of the relationship shown in the table?

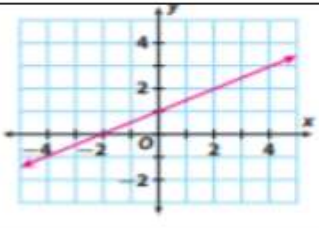
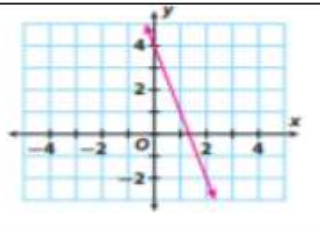
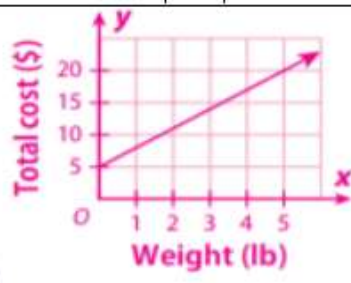
$y = 240x$

Hours (x)	Number of units (y)
2	480
15	3,600
24	5,760
30	7,200
48	11,520
55	13,200

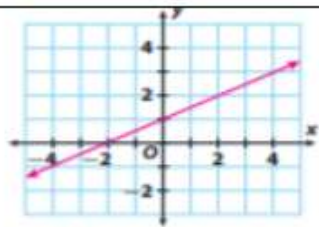
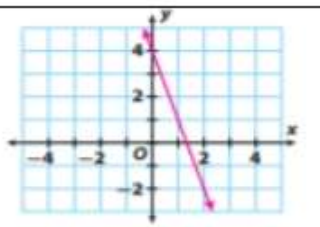
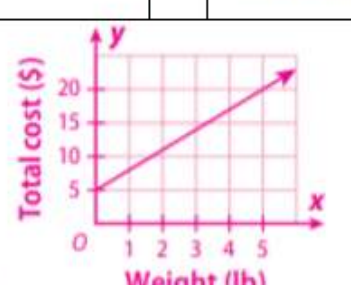
“L.4.3 Graphing Linear Nonproportional Relationships Using Slope and y-intercept”

Q1) which graph represents the equation:-

a)  $y = \frac{1}{2}x + 1$

a) 	b) 
c) 	

b)  $y=3x+5$

a) 	b) 
c) 	

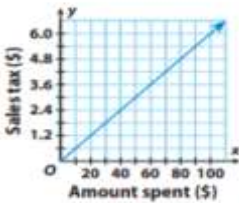
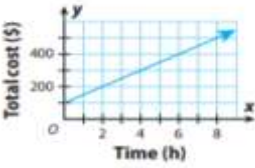
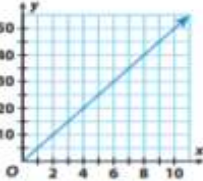
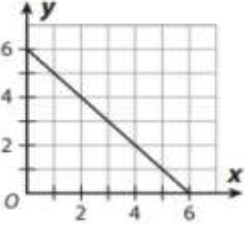
### “L.4.4 Proportional and Nonproportional Situations”

Q1) The change in a test score for each incorrect answer is represented by the equation  $y = -\frac{x}{2}$ , where  $x$  is the number of incorrect answers. Is the relationship between the number of incorrect answers and the change in score proportional or nonproportional?

$$Y = -\frac{1}{2} x$$

Proportional ( $b = 0$ )

Q2) Determine if each relationship is a proportional or nonproportional situation. Explain your reasoning

<p>a)</p>  <p>proportional relationship the line pass through the origin</p>	<p>b)</p>  <p>nonproportional relationship the line doesn't pass through the origin</p>																				
<p>c)</p>  <p>proportional relationship the line pass through the origin</p>	<p>d)</p>  <p>nonproportional relationship the line doesn't pass through the origin</p>																				
<p>e)</p> <table border="1" data-bbox="288 1666 644 1733"> <tbody> <tr> <td><math>x</math></td> <td>0</td> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td><math>y</math></td> <td>0</td> <td>4.5</td> <td>9</td> <td>13.5</td> </tr> </tbody> </table> <p>a proportional relationship, the quotient of <math>y</math> and <math>x</math> is constant</p>	$x$	0	1	2	3	$y$	0	4.5	9	13.5	<p>f)</p> <table border="1" data-bbox="922 1666 1289 1733"> <tbody> <tr> <td><math>x</math></td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td><math>y</math></td> <td>4.5</td> <td>6.5</td> <td>8.5</td> <td>11.5</td> </tr> </tbody> </table> <p>nonproportional relationship, the quotient of <math>y</math> and <math>x</math> is not constant</p>	$x$	1	2	3	4	$y$	4.5	6.5	8.5	11.5
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g)	<table border="1" data-bbox="316 392 735 488"> <thead> <tr> <th>x</th> <td>9</td> <td>36</td> <td>63</td> </tr> <tr> <th>y</th> <td>7</td> <td>28</td> <td>49</td> </tr> </thead> </table> <p data-bbox="292 633 839 712">a proportional relationship, the quotient of y and x is constant</p>	x	9	36	63	y	7	28	49	h)	<table border="1" data-bbox="1086 293 1323 423"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>22</td> <td>4</td> </tr> <tr> <td>46</td> <td>8</td> </tr> <tr> <td>58</td> <td>10</td> </tr> </tbody> </table> <p data-bbox="938 613 1406 728">nonproportional relationship, the quotient of y and x is not constant</p>	x	y	22	4	46	8	58	10
x	9	36	63																
y	7	28	49																
x	y																		
22	4																		
46	8																		
58	10																		
k)	<p data-bbox="292 779 421 813"><math>c = 9.5n</math></p> <p data-bbox="292 860 778 896">proportional relationship, <math>b = 0</math></p>	l)	<p data-bbox="938 779 1150 815"><math>y = 3.75x + 2</math></p> <p data-bbox="938 860 1481 896">nonproportional relationship, <math>b \neq 0</math></p>																
m)	<p data-bbox="292 947 432 983"><math>12x = 5y</math></p> <p data-bbox="292 1028 778 1064">proportional relationship, <math>b = 0</math></p>	n)	<p data-bbox="938 947 1182 983"><math>K = C + 273.15</math></p> <p data-bbox="938 1028 1481 1064">nonproportional relationship, <math>b \neq 0</math></p>																