

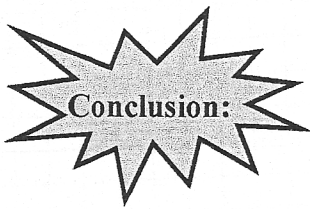
Name: \_\_\_\_\_ Period: \_\_\_\_\_

PROPORTIONAL &  
NON-PROPORTIONAL  
RELATIONSHIPS

## "TO BE OR NOT TO BE PROPORTIONAL"

Dylan makes \$336 for 32 hours of work, and Angela makes \$420 for 42 hours of work.

- 1] How much do Dylan and Angela each make per hour?
- 2] Is Dylan's wage for 25 hours proportional to Amber's wage for 42 hours? Why or why not?



To determine proportionality between two ratios or rates,

\_\_\_\_\_

\_\_\_\_\_.

Find the ratio of  $y$  to  $x$  for Table 1 and Table 2, simplify the fraction to simplest form, and answer the questions that follow.

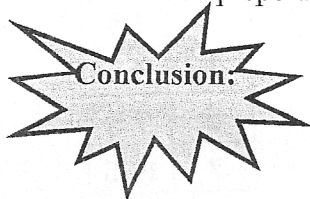
Table 1:

NUMBER OF HOURS	TOTAL COST (\$)	RATIO: $\frac{y}{x}$
1	\$75	
2	\$120	
3	\$165	
4	\$210	
5	\$255	

Table 2:

NUMBER OF HOURS	TOTAL COST (\$)	RATIO: $\frac{y}{x}$
1	\$45	
2	\$90	
3	\$135	
4	\$180	
5	\$225	

- 3] Which table shows a proportional relationship?
- 4] What makes it a proportional relationship?



To determine proportionality from a table,

\_\_\_\_\_.

Below are the graphs for the tables in the previous section. Use the graphs to determine proportionality.

Table 1:

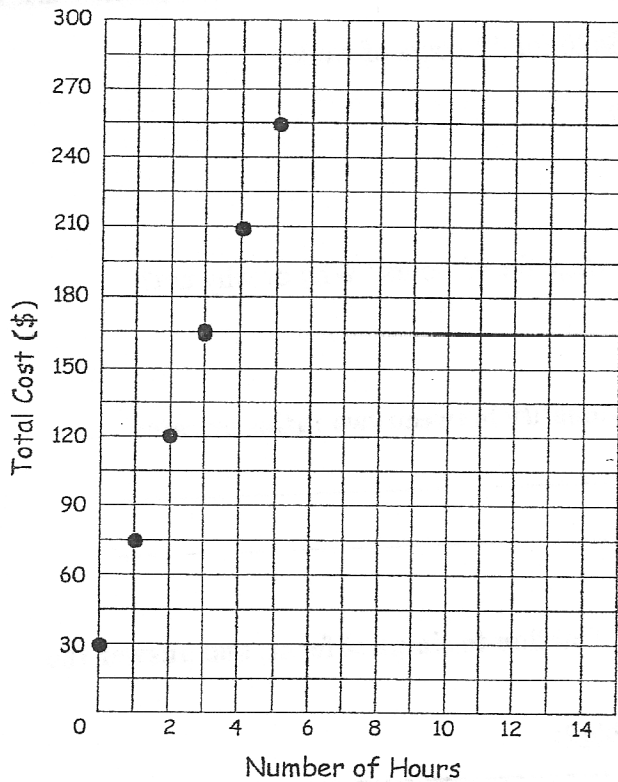
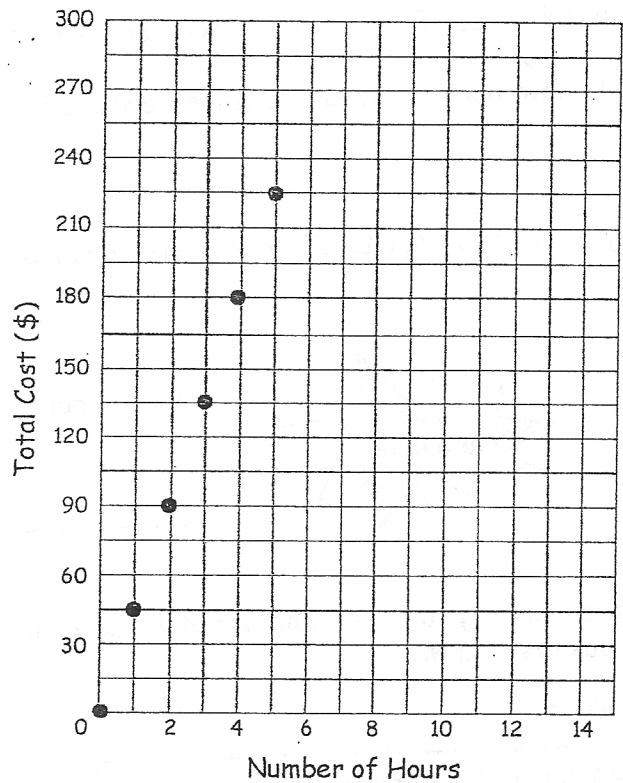


Table 2:



- 5] Which graph shows a proportional relationship?
- 6] What makes it a proportional relationship?



To determine proportionality from a graph,

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Determine which of the following tables represent proportional relationships.

1)

x	y
1	-3
2	-6
3	-9
4	-12
5	-15

8)

x	y
-4	-8
-2	-4
0	0
2	4
4	8

9)

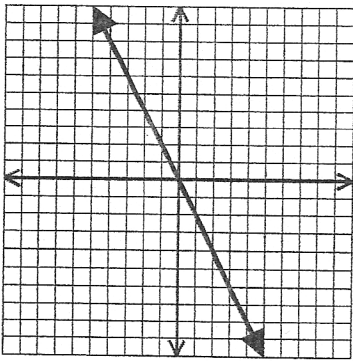
x	y
-1	-6
0	-5
1	-3
2	0
3	4

10)

x	y
-1	-1.5
1	1.5
3	4.5
5	7.5
7	10.5

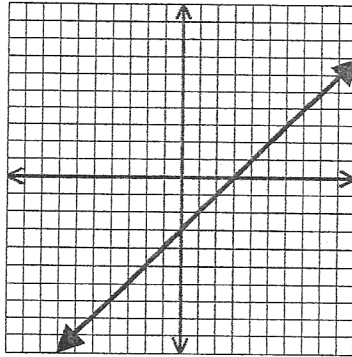
Determine which of the following graphs represent proportional relationships. Circle the appropriate response.

11.



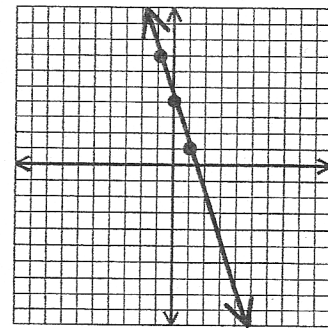
Proportional    non-proportional

12.



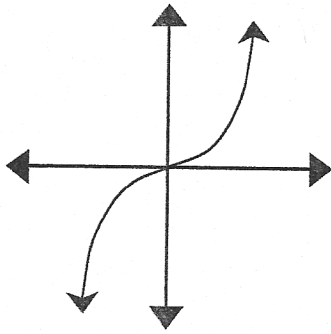
Proportional    non-proportional

13.



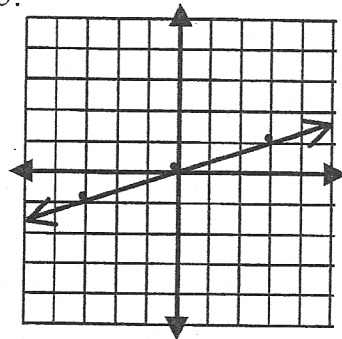
Proportional    non-proportional

14.



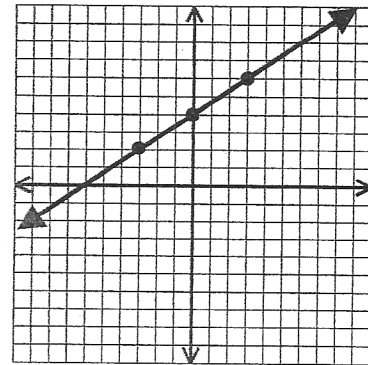
Proportional    non-proportional

15.



Proportional    non-proportional

16.



Proportional    non-proportional

17. Is the following relationship proportional? Explain.

Number of Movie Tickets (x)	Total Cost of Tickets (y)	$\frac{y}{x}$
1	-6	
2	-12	
3	-18	
4	-24	

18. How is a proportional relationship different from a non-proportional relationship?