

AD# _____

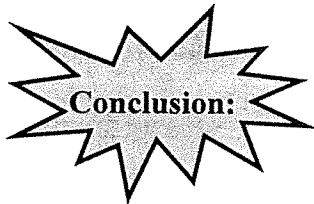
Name: _____

"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:

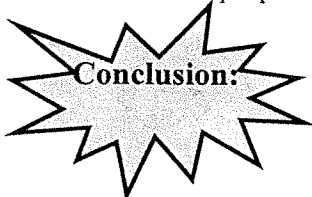
| NUMBER OF HOURS | TOTAL COST (\$) | RATIO: $\frac{y}{x}$ |
|-----------------|-----------------|----------------------|
| 1 | \$75 | |
| 2 | \$120 | |
| 3 | \$165 | |
| 4 | \$210 | |
| 5 | \$255 | |

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:

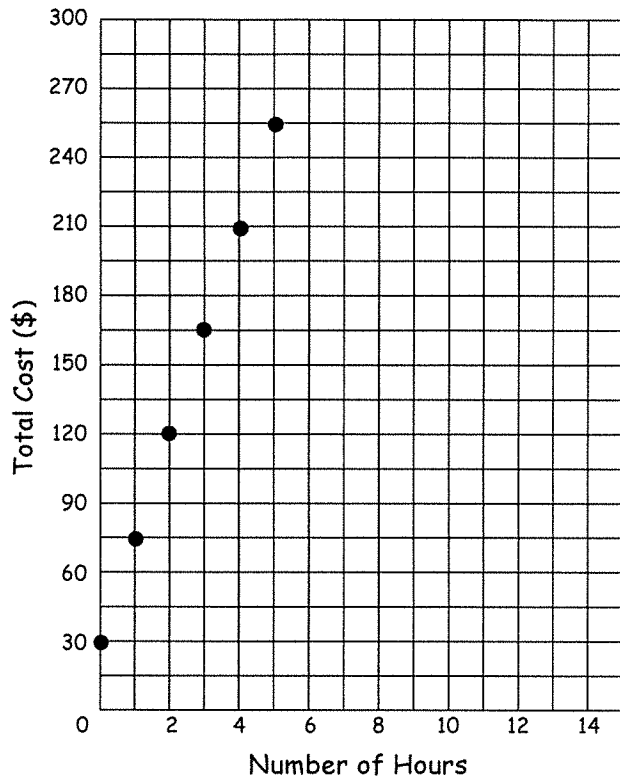
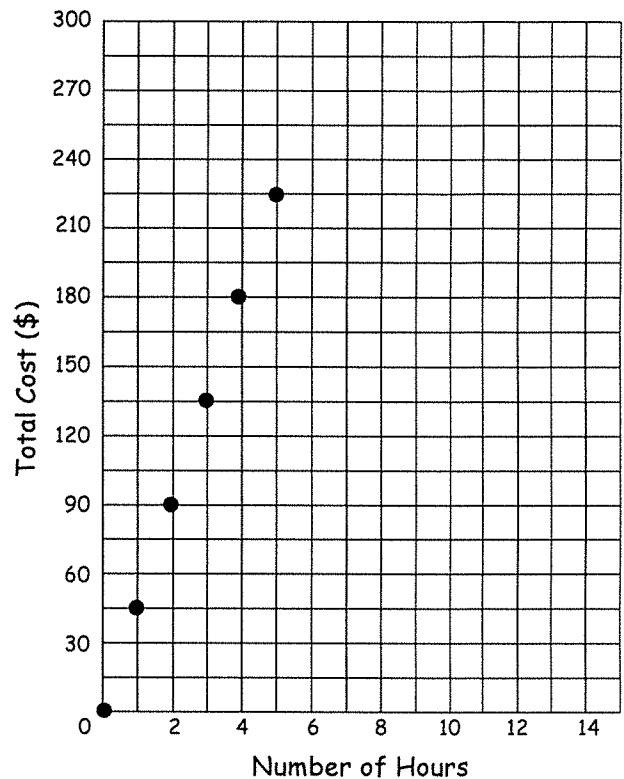
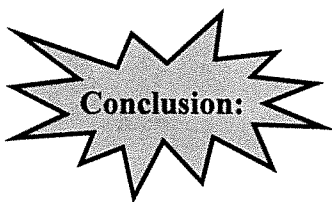


Table 2:



5) Which graph shows a proportional relationship?

6) What makes it a proportional relationship?



To determine proportionality from a graph,

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 |

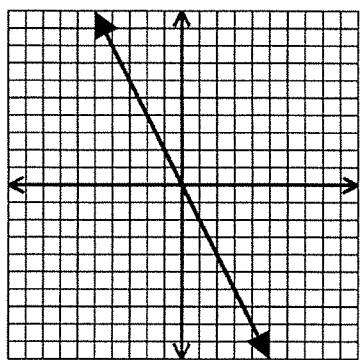
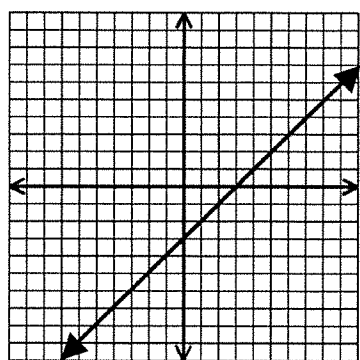
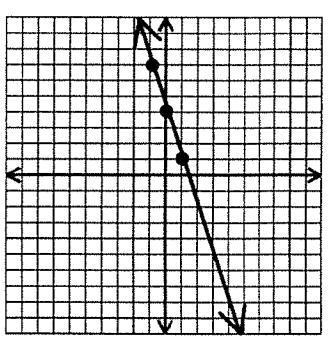
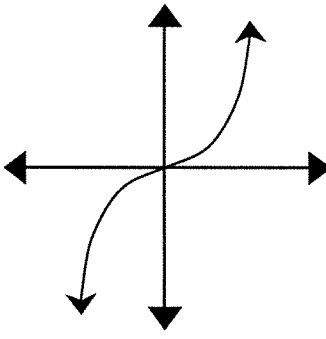
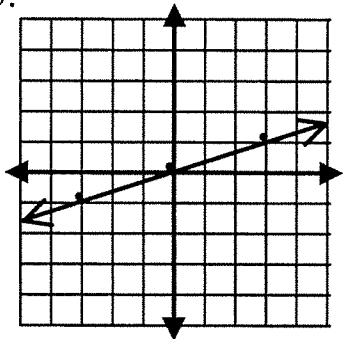
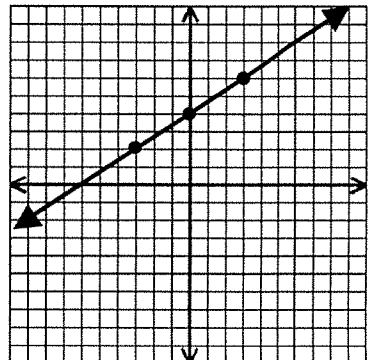
9)

| 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.

| | | |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <p>11.</p>  <p>Proportional non-proportional</p> | <p>12.</p>  <p>Proportional non-proportional</p> | <p>13.</p>  <p>Proportional non-proportional</p> |
| <p>14.</p>  <p>Proportional non-proportional</p> | <p>15.</p>  <p>Proportional non-proportional</p> | <p>16.</p>  <p>Proportional non-proportional</p> |

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?