$\qquad$ Period: $\qquad$ Date Due: $\qquad$

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,
$\qquad$
$\qquad$ .

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

Table 1:

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

Table 2:

| NUMBER <br> OF HOURS | TOTAL <br> COST (\$) | RATIO: $\frac{\boldsymbol{y}}{\boldsymbol{x}}$ |
| :---: | :---: | :---: |
| 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,
$\qquad$
$\qquad$
$\qquad$

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) 

| $\boldsymbol{x}$ | $\boldsymbol{y}$ |
| :---: | :---: |
| -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. | 12. <br> Proportional <br> non-proportional | 13. |
| :---: | :---: | :---: |
| 14. <br> Proportional non-proportional | 15. <br> Proportional | 16. <br> Proportional <br> non-proportional |

17. Is the following relationship proportional? Explain.

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

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