## Proportional Relationships

If two quantities are $\qquad$ then they have a $\qquad$ ratio.

If the ratio is not constant, the two quantities are said to be $\qquad$ .

Constant of Proportionality is the value of two ratios.

## How to identify proportional relationships:

1. Will always go through the $\qquad$ The origin is point $\qquad$ .
2. The graph will be a $\qquad$ line.
3. Always write the constant ratio in the form of $\qquad$ -
4. Reduce or divide the $\qquad$ by the $\qquad$ to find the constant ratio for each.

Every time you divide $\frac{y}{x}$ you get a $\qquad$
of $\qquad$ .

| x | y | $\frac{y}{x}$ |
| :---: | :---: | :---: |
| 5 | 10 |  |
| 8 | 16 |  |
| 10 | 20 |  |
| 14 | 28 |  |
| 21 | 42 |  |

We can stop the problem because two
$\qquad$ constant.

| $x$ | $y$ | $\frac{y}{x}$ |
| :---: | :---: | :---: |
| 0 | 2 |  |
| 3 | 8 |  |
| 5 | 12 |  |
| 9 | 20 |  |
| 10 | 22 |  |

Draw a line that would represent a proportional relationship on the graph below.


Tell if the ordered pairs represents a proportional relationship.
First, label each value as ( $\mathrm{x}, \mathrm{y}$ ).
$\{(8,4),(10,5),(5,2.5),(12,6)\}$
—, _ , —, _ , —, _ , —, -
What is the constant of proportionality?
The constant of proportionality is $\qquad$ .

