

## Proportion Worksheets (Tables)

1. The table below represents the relationship of the amount of snowfall (in inches) in 5 counties to the amount of time (in hours) of a recent winter storm. Determine if  $y$  is proportional to  $x$ . Justify your answer

$x$ Time (h)	$y$ Snowfall (in.)
2	10
6	12
8	16
2.5	5
7	14

2. The table below shows the relationship between the cost of renting a movie (in dollars) to the number of days the movie is rented. Determine if  $y$  is proportional to  $x$ . Justify your answer

$x$ Number of Days	$y$ Cost (dollars)
6	2
9	3
24	8
3	1

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$x$ Time (h)	$y$ Snowfall (in.)
2	10
6	12
8	16
2.5	5
7	14

$$\frac{10}{2} = 5 \quad \frac{12}{6} = 2 \quad \frac{16}{8} = 2 \quad \frac{5}{2.5} = 2 \quad \frac{14}{7} = 2$$

$y$  (snowfall) is not proportional to  $x$  (time) because all of the values of the ratios comparing snowfall to time are not equivalent. All of the values of the ratios must be the same for the relationships to be proportional. There is NOT one number such that each measure of  $x$  (time) multiplied by the number gives the corresponding measure of  $y$  (snowfall).

2. The table below shows the relationship between the cost of renting a movie (in dollars) to the number of days the movie is rented. Determine if  $y$  is proportional to  $x$ . Justify your answer

$x$ Number of Days	$y$ Cost (dollars)
6	2
9	3
24	8
3	1

$$\frac{2}{6} = \frac{1}{3} \quad \frac{3}{9} = \frac{1}{3} \quad \frac{8}{24} = \frac{1}{3} \quad \frac{1}{3} = \frac{1}{3}$$

$y$  (cost) is proportional to  $x$  (number of days) because all of the values of the ratios comparing cost to days are equivalent. All of the values of the ratios are equal to  $\frac{1}{3}$ . Therefore, every measure of  $x$  (days) can be multiplied by the number  $\frac{1}{3}$  to get each corresponding measure of  $y$  (cost).