

Lesson 4 Summary

When two proportional relationships are represented in different ways, we compare them by finding a common piece of information.

(rate of change, slope, or constant of proportionality)

For example, Clare's earnings are represented by the equation $y = 14.5x$, where y is her earnings in dollars for working x hours.

The table shows some information about Jada's pay.

time worked (hours)	earnings (dollars)
7	92.75
4.5	59.63
37	490.25

Who is paid at a higher rate per hour?
How much more does that person have after 20 hours?

In Clare's equation we see that the constant of proportionality relating her earnings to time worked is 14.50. This means that she earns \$14.50 per hour.

We can calculate Jada's ^{table} constant of proportionality by dividing a value in the earnings column by a value in the same row in the time worked column. Using the last row, the constant of proportionality for Jada is 13.25, since $490.25 \div 37 = 13.25$. An equation representing Jada's earnings is $y = 13.25x$. This means she earns \$13.25 per hour.

So Clare is paid at a higher rate than Jada. Clare earns \$1.25 more per hour than Jada, which means that after 20 hours of work, she has $20 \cdot \$1.25 = \25 more than Jada.