



## Study Link Help: Rates

Grade 4, Study Link 12-2, 12-3, 12-4

**Rates compare two amounts that have different units. For example, a store might sell apples at the rate of 3 apples for 75 cents (comparing apples with cents) or a car's gasoline mileage might be 180 miles for every 10 gallons (comparing miles with gallons).**

- These comparisons can be written as fractions:  $\frac{3 \text{ apples}}{75 \text{ cents}}$   $\frac{180 \text{ miles}}{10 \text{ gallons}}$
- A rate tells how many of one thing there are for a certain number of another thing. Rates often contain the word per, meaning “for each” or “for every.”

### Help with Study Link Problems

- Constructing rate tables is one way to solve these problems. Note that some of the problems on this Study Link require more than one rate table.
- Have your child think about the known information and the unknown information—the information that needs to be figured out. Organize the information in a rate table.

***Example:***

I earn \$10 in one day. I enter this information in the rate table. I use the relationship of 10 per 1 to figure out how much I earn in 2 days, 3 days, and so on.

Earnings	\$10	\$20	\$30	\$50
Days	1	2	3	5

***Example:***

Sometimes the information given in the problem does not involve a rate of one per something. First ask your child to figure out the one to something rate.

A car goes 180 miles on 10 gallons of gas. I enter this information in the rate table. I figure out how far it will go on 1 gallon by dividing both numbers by 10 (the number of gallons). I can use a rate table to help me find other comparisons.

1 gallon per 18 miles

Miles	18	54	180	360
Gallons	1	3	10	20

- Rate problems are a special kind of “What’s My Rule?” problem. Your child might see the connection if you turn the rate table sideways. For more information about the “What’s My Rule?” routine, see Student Reference Book pages 162-166.



*Example:*

Rule
Earn \$10 per day

Total Earnings	Number of Days
\$10	1
\$20	2
\$30	3
\$40	4

**Extra Practice Ideas**

- Consider having your child solve or create “What’s My Rule Problems.” See Student Reference Book pages 162-166 for more information.
- Make up rate problems of your own. Encourage your child to make a rate table to solve the problems.