


**MasterMath**

**Number Sense**

**RATIOS AND RATES**




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**Ratios**




**Nutrition Facts**

Start Here

Check Calories

**Rates**

**Ratios and Rates**

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**Ratio:** a comparison of 2 quantities

4/2 or 4 : 2 or 4 to 2

**Rate:** a ratio of 2 quantities with different units

$\frac{4 \text{ miles}}{2 \text{ hours}}$  or 4 miles in 2 hours  
or 4 miles per 2 hours

**Unit Rate:** a rate with a denominator of 1

$\frac{2 \text{ miles}}{1 \text{ hour}}$  or 2 miles per hour  
or 2 MPH

**Ratios and Rates**

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**Example:**

You make \$16.00 for helping your Dad do yard work. You work 4 hours. What was your hourly wage?

Ratio: 16 : 4 or 16/4

Rate:  $\frac{\$16}{4 \text{ hours}}$  or \$16 per 4 hours

Unit Rate:  $\frac{\$4}{1 \text{ hour}}$  or \$4 per hour

$$\frac{16}{4} = \frac{4}{1}$$

Ratios and Fra

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**You try it!**

Your family is driving to Toledo. On the first day you drive for 6 hours, and travel 300 miles. What was your average miles per hour?



Ratios and Fra

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$$\text{MPH} = \frac{M}{H}$$

$$\frac{300 \text{ MILES}}{6 \text{ HOURS}} = \frac{50 \text{ MILES}}{1 \text{ HOUR}} = 50 \text{ MPH}$$

Ratios and Fra

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**You try it!**

There are a lot of kids that live on your street: 14 boys and 16 girls. What is the ratio of boys to girls?

Ratios and Fra

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$$\frac{14}{16} = \frac{7}{8} = 7:8$$

Ratios and Fra

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**You try it!**

Orange juice is \$6.40 for a gallon. You can also buy a quart, and the unit price for quarts is \$.08 per fluid ounce. There are 128 fluid ounces in a gallon. Is the orange juice cheaper by the gallon than by the quart?

Ratios and Ra

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$$\frac{\$6.40}{128 \text{ oz}} = \frac{\$.08}{1 \text{ oz}} = \$.05 \text{ per oz}$$

Ratios and Fractions

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**You try it!**

You've been offered summer jobs at 2 different businesses. Miracle Maintenance will pay you \$24 for each 6 hour day that you work. Barney's Bait Shop will pay you \$140 for a 40 hour work week. Where will you make more per hour?

Ratios and Fractions

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$$\frac{\$24}{6 \text{ HRS}} = \$4 \text{ per hour}$$
$$\frac{\$140}{40 \text{ HRS}} = \$3.50 \text{ per hour}$$

Ratios and Fractions

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**You try it!**

At Charlie's Chicken you can buy a drumstick for \$1.25, or you can buy 16 drumsticks for \$17.60. If you buy the 16 drumstick pack, how much do you save per drumstick?

Ratios and Rates

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$$\frac{\$}{\text{drumstick}} \quad \frac{\$17.60}{16 \text{ drumsticks}} =$$

$$\$1.10 \text{ per drumstick}$$

$$\$1.25 - \$1.10 = \$0.15$$

Ratios and Rates

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**You try it!**

Now, try it on your own. Go to [www.MasterMath.info](http://www.MasterMath.info) download Ratios and Rates from the Worksheets Page, and test your skill.

Ratios and Rates

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