

**Math 7 - Sections 1.1-1.3
Review Problems
Station # 1
Ratios AND Rates**

Key

Things to remember:

- * Ratios should always be simplified
Ex. 10 to 5 becomes 2 to 1
- * The order is important. The ratio of _____ to _____ means the first thing is in the numerator and the second is in the denominator. The rate _____ per _____ means the first thing is in the numerator and the second is in the denominator.
- * ALWAYS write a WORD ratio or rate first !
- * ALWAYS record the calculator display on your paper before rounding your answer.

1) There are 250 students in the 7th grade. If there are 75 boys, find the ratio of girls to boys.

$$\frac{\text{girls}}{\text{boys}} = \frac{250-75}{75} = \frac{175}{75} = \left(\frac{7}{3}\right)$$

2) Sara drove 280 miles in 3.5 hours. How many miles per hour is this?

$\frac{\text{miles}}{\text{hour}}$

$$\frac{280}{3.5}$$

$$280 \div 3.5$$

80 mi/hr.

3) There are 48 jolly ranchers in a 20 ounce bag that costs \$3.89.

A) Find the cost per jolly rancher.

$$\frac{\text{cost}}{\text{j.r.}}$$

$$\frac{3.89}{48}$$

$$0.0810$$

$$\text{\$}0.08/\text{j.r.}$$

B) Find the weight of each jolly rancher. Round to the nearest tenth of an ounce.

$$\frac{\text{ounces}}{\text{j.r.}}$$

$$\frac{20}{48}$$

$$0.4166\dots$$

$$0.41\bar{6} \text{ oz/j.r.}$$

4) Tara typed for 12 minutes and produced 456 words. How many words per minute does she type?

$\frac{\text{Words}}{\text{min}}$

$$\frac{456}{12}$$

$$456 \div 12$$

38 words/min

5) There are 80 girls in the 7th grade at LMS. If there are 100 boys in the class, find the ratio of girls to the total number of students.

$$\frac{\text{girls}}{\text{total}} = \frac{80}{80+100} = \frac{80}{180}$$
$$= \frac{8}{18}$$
$$= \frac{4}{9}$$

6) Write these percents as ratios in simplest form.

$$40\% = \frac{40}{100} = \left(\frac{2}{5}\right)$$

$$135\% = \frac{135}{100} = \left(\frac{27}{20}\right)$$

$$2\% = \frac{2}{100} = \left(\frac{1}{50}\right)$$

$$24\% = \frac{24}{100} = \left(\frac{6}{25}\right)$$

7) Write these ratios in simplest form.

A) 25:150 $\frac{25}{150} = \left(\frac{1}{6}\right)$

B) $\frac{24}{8}$ $\left(\frac{3}{1}\right)$

C) $\frac{40 \text{ inches}}{4 \text{ feet}}$ $\frac{40 \cancel{\text{ in}}}{4 \cdot 12 \cancel{\text{ in}}} = \frac{40}{48} = \left(\frac{5}{6}\right)$