

4-1 Rates and Ratios

$$\frac{3 \text{ raisins}}{6 \text{ peanuts}} = \frac{1 \text{ raisin}}{2 \text{ peanuts}}$$

Ratio - a comparison of two numbers ^(same units) by division.

3 to 6 3:6 $\frac{3}{6}$ first number = top

first in the order you read it.

$$\frac{8 \text{ } \div 4}{28 \text{ total } \div 4} = \left(\frac{2}{7} \right)$$

Remember: Divide both the numerator and denominator by the same #.

$$\frac{10 \text{ oz.}}{1 \text{ lb.}} = \frac{10 \text{ oz.}}{16 \text{ oz.}} = \frac{5}{8} \frac{\text{oz.}}{\text{oz.}}$$

Ratio:
Labels are
the same

$$1 \text{ A. } \frac{16}{24} = \frac{2}{3} \text{ pizzas}$$

$$1 \text{ B. } \frac{12 \text{ min}}{2 \text{ hrs}} = \frac{12 \text{ min}}{120 \text{ min}} = \frac{1}{10} \text{ minutes}$$

Rate
compares two quantities w/ different types of
units.

$$\frac{\$5.00}{2 \text{ lbs}} = \frac{2.50}{1 \text{ lbs.}} \quad \frac{15 \text{ miles}}{3 \text{ hours}} = \frac{5 \text{ mi.}}{1 \text{ hr.}}$$

Unit Rate -
the denominator has to be one(1).

$$\frac{187 \text{ mi.}}{3 \text{ hrs.}} = \frac{62.\bar{3} \text{ miles}}{1 \text{ hour}} \text{ PER}$$

9.)

\$
1 apple
quantity

? how many?

$$\frac{\$ 0.95}{4 \text{ apples}} = \frac{\$ 0.24}{1 \text{ apple}} \quad \text{Better Buy}$$

$$\frac{\$ 1.49}{6 \text{ apples}} = \frac{\$ 0.25}{1 \text{ apple}}$$

10.) $\frac{33 \text{ brown} \div 3}{18 \text{ white} \div 3}$ ^{Ratio} $\left(\frac{11}{6} \right)$ $11:6$
 $11 \text{ to } 6$

Do not need a label here, it is just a ratio

REDUCE

$$16.) \quad \frac{2 \text{ cups}}{1 \text{ gallon}} = \frac{2 \text{ cups}}{16 \text{ cups}} = \frac{1}{8} \text{ cups}$$