

Ratio - Proportion Review

Jan 13/15

- ① Ratio → a comparison of quantities with the same units
- ② Rate → " " " " different units
- ③ Proportions → when two ratios are equal.

Ex Write in lowest terms in 3 ways (think: ÷ by 2, 3, 5, 7, 11)

$$\begin{aligned} \text{a) } 6:8 & \rightarrow \frac{6}{8} = \frac{3}{4} \rightarrow 6 \text{ to } 8 = 3 \text{ to } 4 \\ & = 3:4 \end{aligned}$$

Ex Write two equivalent ratios (divide, multiply each # by the same #)

$$\begin{aligned} \text{a) } 3:21 & = 6:42 = 9:63 \\ & (= 1:7) \end{aligned}$$

Ex Solve for x

$$\text{a) } 3:7 = 50:x$$

$$\frac{3}{7} = \frac{50}{x}$$

$$\frac{7}{3} = \frac{x}{50}$$

$$50 \left(\frac{7}{3} \right) = 50 \left(\frac{x}{50} \right)$$

$$116.7 = x$$

Ex Ratio of boys to girls is 5:6.
If there are 400 girls in school,
how many are boys?

$$\text{boys : girls} = \text{boys : girls}$$

$$5:6 = x:400$$

$$(400) \frac{5}{6} = \frac{x}{400} (400)$$

$$333.3 = x$$

∴ there are 333 boys in school

④ Unit Rate

Determine the better buy. Give a reason.

A: 12 apples for \$3

$$\text{Unit rate} = \frac{\$3}{12}$$

$$= \$0.25/\text{apple}$$

B: 18 apples for \$4.40

$$\text{Unit rate} = \frac{4.40}{18}$$

$$= \$0.24/\text{apple}$$

∴ B is better buy → costs less

cont'd

Review cont'd.

Jan 13/14

⑤ Rates per 100 units

Ex Determine the rate per 100 units

a) \$3.00 for 750 grams of peanuts

dollars : grams = dollars : grams

$$3 : 750 = x : 100$$

$$(100) \frac{3}{750} = \frac{x}{100} (100)$$

$$0.40 = x$$

\therefore 100 grams is \$0.40

(rate per 100 is
\$0.40/100 grams)

Practice
wkst: Rates
Proportion Review