

8th Grade Lessons 66 & 67

- I can solve ratio word problems.
- I can use ratios to compare.

The ratio of the number of parrots to the number of macaws was 5 to 7. How many macaws were there when the parrots number 750?

$$\frac{5}{7} = \frac{750}{m}$$

$$\begin{aligned} \frac{5}{7} &= \frac{750}{m} \\ 5m &= 7 \cdot 750 \\ 5m &= 5250 \\ \frac{5m}{5} &= \frac{5250}{5} \\ m &= 1050 \\ 1050 \text{ macaws} \end{aligned}$$

The ratio of the number of wrigglers to the number of squirmers was 13 to 2. When 26 students had the wrigglers, how many were squirming?

$$\frac{13}{2} = \frac{26}{x}$$

$$13x = 26 \cdot 2$$

$$\frac{13x}{13} = \frac{52}{13}$$

$$x = 4$$

4 students

Ratios can be used to determine unit prices.
The **unit price** is the price for one item.

If 20 pounds of beans sold for \$1.20, what was the price per pound of beans?

$$\frac{\$1.20}{20 \text{ lbs}} = \frac{\$0.06}{1 \text{ lb}}$$

$$\frac{1 \text{ lb}}{\$0.06}$$

$$\begin{array}{r} 33\frac{2}{3} \\ 06 \overline{) 200} \\ \underline{198} \\ 2 \end{array}$$

$$\frac{\$2}{1} \cdot \frac{1 \text{ lb}}{\$0.06} = 33\frac{1}{3}$$

$33\frac{1}{3} \text{ lbs}$

The big can held 16 ounces and cost 80 cents. The small can held 12 ounces and cost 72 cents. Which can was the better buy?

$$\frac{80¢}{16 \text{ oz}} = \frac{5¢}{1 \text{ oz}}$$

$$\frac{72¢}{12 \text{ oz}} = \frac{6¢}{1 \text{ oz}}$$

The big can
is the better
buy

Assignment:

Ratios Practice Sheet ^{dye} and
Test #16 ^{and} on Monday
and PS 65