Ratios

Ratios compare two quantities.

Test - 20 questions
Correct - 15 questions
Incorrect - 3 questions
Blank - 2 questions

What is the ratio of the number of correct questions to the total number of test questions?

$\frac{15 \text{ correct}}{20 \text{ questions}}$ $\frac{15 \div 5}{20 \div 5} = \frac{3}{4}$, 3 to 4, 3:4

What is the ratio of the number of correct questions to the number of incorrect questions?

$\frac{15 \text{ correct}}{3 \text{ incorrect}}$ $\frac{15 \div 3}{3 \div 3} = \frac{5}{1}$, 5 to 1, 5:1

1. Write the ratios in order from least to greatest.

4:5, 1 to 2, 8:12, $\frac{3}{4}$

.8 .5 .$\overline{6}$ .75

$\frac{4}{5} = .8$ $5\overline{)4.0}$ -40 0 $.8$

$\frac{8}{12} \div 4 = \frac{2}{3} = .\overline{6}$ $3\overline{)2.0}$ -18 2 $.\overline{6}$

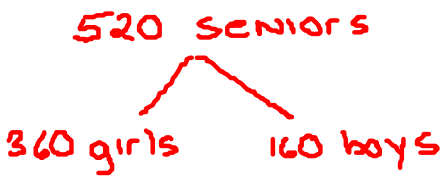
$\frac{1}{2} = .5$

$\frac{3}{4} = .75$

.5, .$\overline{6}$, .75, .8

1 to 2, 8:12, $\frac{3}{4}$, 4:5

2. Out of 520 seniors, 360 are girls. What is the ratio of girls to boys?



$\frac{360 \text{ Girls}}{160 \text{ Boys}}$ $\quad \frac{360}{160} = \frac{36 \div 4}{16 \div 4} = \frac{9}{4}$

Equivalent Ratios

$\frac{9}{4}$, 9 to 4, 9:4

3. A car travels 50 miles in 2 hours. What is the speed of the car in miles per hour?

$\frac{50 \text{ miles}}{2 \text{ hours}}$ $\quad \frac{50 \div 2}{2 \div 2} = \frac{25}{1} =$ 25 mph

4. Four people go out to lunch and the bill totals $26.20. What is the cost per person?

$\frac{\$26.20}{4 \text{ people}}$ $\quad \frac{26.20}{4} =$ $6.55 per person

$$\begin{array}{r} 6.55 \\ 4\overline{)26.20} \\ -24 \\ \hline 22 \\ -20 \\ \hline 20 \\ -20 \\ \hline 0 \end{array}$$

5. Find the unit rate.

$\frac{\$13.83}{3 \text{ servings}}$

$\frac{13.83 \div 3}{3 \div 3} = \frac{4.61}{1}$

$4.61 per serving

$$\begin{array}{r} 4.61 \\ 3 \overline{)\,13.83} \\ -12 \\ \hline 18 \\ -18 \\ \hline 03 \end{array}$$