8th Grade
Lesson 59

I can solve proportions with fractions.

The same method is used to solve conditional proportions whether they contain whole numbers, decimals, fractions, or mixed numbers.

$$\frac{\frac{2}{3}}{x} = \frac{\frac{5}{8}}{\frac{1}{5}}$$

$$\frac{5}{8}x = \frac{2}{3} \cdot \frac{1}{5}$$

$$\frac{8}{5} \cdot \frac{5}{8}x = \frac{2}{15} \cdot \frac{8}{5}$$

$$x = \frac{16}{75}$$

$$\frac{x}{\frac{3}{4}} = \frac{\frac{1}{3}}{\frac{2}{5}}$$

$$\frac{2}{5}x = \frac{1}{3} \cdot \frac{3}{4}$$

$$\frac{5}{2} \cdot \frac{2}{5}x = \frac{1}{4} \cdot \frac{5}{2}$$

$$x = \frac{5}{8}$$

$$\frac{\frac{3}{2}}{\frac{1}{5}} = \frac{\frac{1}{4}}{x}$$

$$\frac{3}{2}x = \frac{1}{5} \cdot \frac{1}{4}$$

$$\frac{2}{3} \cdot \frac{3}{2}x = \frac{1}{20} \cdot \frac{2}{3}$$

$$x = \frac{1}{30}$$

$$\frac{\frac{1}{3}}{y} = \frac{\frac{1}{5}}{7}$$

$$\frac{1}{5}y = \frac{7}{1} \cdot \frac{1}{3}$$

$$5 \cdot \frac{1}{5}y = \frac{7}{3} \cdot 5$$

$$y = \frac{35}{3}$$

Assignment

Problem Set 59