TAKS Objective 9
TEK 8.3B
Tutorial
(Grades 9, 10, and 11)

…estimate and find solutions to application problems involving percents and other proportional relationships, such as similarity and rates.

When solving problems involving percents, fractions can be written.

When the two fractions are equal, they can be written as a proportion.

How are proportions solved?

Cross-multiply.
Then divide by the remaining number.

56% of Jim's salary goes for rent and utilities. If Jim earns $1600 a month, how much does Jim have to spend on items other than rent and utilities?

$100\% - 56\% = 44\%$

$$\frac{44}{100} = \frac{\quad}{1600}$$

$$\frac{44(1600)}{100} = \$704$$

Betty bought a shirt for $15. If sales tax is 8 ¼%, what was the total cost of the shirt?

$$\frac{8\frac{1}{4}}{100} = \frac{\quad}{15}$$

$$\frac{8\frac{1}{4}(15)}{100} = 1.2375 = 1.24$$

$\$15 + \$1.24 = \$16.24$

Jud plans to plow a field of 15 acres. Jud plowed 4 acres in 1 3/4 hours. At this rate, how long will it take him to finish plowing the field?

11 acres remain

AC $\frac{4}{1\frac{3}{4}} = \frac{11}{?}$

HR

$\frac{1\frac{3}{4}(11)}{4} = 4.8125 \text{ hrs}$

$= 4\frac{13}{16} \text{ hrs}$

A blueprint has a scale of ¾ inch = 2 feet. If the living room in the blueprint has a width of 3 inches, how wide is the actual living room?

$$\frac{\text{in}}{\text{ft}} \quad \frac{3/4}{2} = \frac{3}{?}$$

$$\frac{2(3)}{3/4} = 8 \text{ ft}$$