Lesson 6-8

Example 1 Percents as Fractions
SPORTS   In a survey of favorite sports, 20.4% of the people chose soccer. What fraction is this? Write in simplest form.

$20.4\% = \dfrac{20.4}{100}$ Write a fraction with a denominator of 100.

$\quad = \dfrac{20.4}{100} \cdot \dfrac{10}{10}$ Multiply by $\dfrac{10}{10}$ to eliminate the decimal in the numerator.

$\quad = \dfrac{204}{1,000}$ or $\dfrac{51}{250}$ Simplify.

So, $\dfrac{51}{250}$ of the people chose soccer.

Example 2 Percents as Fractions
Write $6\dfrac{1}{4}\%$ as a fraction in simplest form.

$6\dfrac{1}{4}\% = \dfrac{6\frac{1}{4}}{100}$ Write a fraction.

$\quad = 6\dfrac{1}{4} \div 100$ Divide.

$\quad = \dfrac{25}{4} \div 100$ Write $6\dfrac{1}{4}$ the mixed number as an improper fraction.

$\quad = \dfrac{25}{4} \times \dfrac{1}{100}$ Multiply by the reciprocal of 100 which is $\dfrac{1}{100}$.

$\quad = \dfrac{25}{400}$ or $\dfrac{1}{16}$ Simplify.

Example 3 Fractions as Percents
TESTS   On a science test, Edward got 17 questions correct out of 20. Find his grade as a percent.

To find his grade, write $\dfrac{17}{20}$ as a percent.

$$\dfrac{17}{20} = \dfrac{n}{100}$$ Write a proportion using $\dfrac{n}{100}$.

$1{,}700 = 20n$ Find the cross products.

$$\dfrac{1{,}700}{20} = \dfrac{20n}{20}$$ Divide each side by 20.

$85 = n$ Simplify.

So, Edward scored 85% on his science test.

Example 4 Fractions as Percents
Write $\dfrac{7}{12}$ as a percent. Round to the nearest hundredth.

$$\dfrac{7}{12} = \dfrac{n}{100}$$ Write a proportion using $\dfrac{n}{100}$.

$700 = 12n$ Find the cross products.

$700 \div 12 = 58.333333333$ Use a calculator to simplify.

So, $\dfrac{7}{12}$ is about 58.33%.

Example 5 Fractions as Percents
Write $\dfrac{2}{9}$ as a percent. Round to the nearest hundredth.

$\dfrac{2}{9} = 0.2222222222...$ Write $\dfrac{2}{9}$ as a decimal.

$\approx 22.22\%$ Multiply by 100 and add the %.

Example 6 Fractions as Percents

HOMEWORK Kyle has completed $\dfrac{7}{8}$ of his homework assignment. What percent of his homework has he completed?

$\dfrac{7}{8} = 0.875$ Write $\dfrac{7}{8}$ as a decimal.

$\quad = 87.5\%$ Multiply by 100 and add the %.

So, Kyle has completed 87.5% of his homework assignment.