

7th Grade Lesson 43

- I can convert decimals to fractions.
- I can convert fractions and mixed numbers to decimals.
- I can convert percents to decimals.

Converting decimals to fractions:

Write the digits after the decimal point as the numerator of the fraction. For the denominator, write the place value of the last digit. Then reduce.

Or.....

"Say the decimal number." Then reduce.

Write 0.125 as a fraction.

$$\frac{125}{1000} = \frac{1\cancel{5}\cdot\cancel{5}\cdot\cancel{5}}{2\cdot2\cdot2\cdot\cancel{5}\cdot\cancel{5}\cdot\cancel{5}} = \frac{1}{8}$$

$$\begin{array}{r} 5 \overline{)125} \\ \underline{5} \\ 5 \\ \underline{5} \\ 0 \end{array}$$

$$\begin{array}{r} 5 \overline{)1000} \\ \underline{5} \\ 5 \\ \underline{5} \\ 0 \\ 2 \\ \underline{2} \\ 0 \end{array}$$

Write 11.42 as a mixed number.

$$11\frac{42}{100} = 11\frac{21}{50}$$

Converting fractions to decimals:

Perform the division indicated by the fraction.

$$\begin{array}{l} \rightarrow \frac{1}{4} \\ \rightarrow \frac{1}{4} \end{array} \quad \begin{array}{r} 0.25 \\ 4 \overline{) 1.000} \\ \underline{8} \\ 20 \\ \underline{20} \\ 0 \end{array} \quad \frac{1}{4} = 0.25$$

Convert $\frac{1}{3}$ to a decimal.

$$\begin{array}{r} 0.333 \\ 3 \overline{) 1.000} \\ \underline{9} \\ 10 \\ \underline{9} \\ 10 \end{array} \quad \frac{1}{3} = 0.\overline{3}$$

Every fraction of whole numbers converts to either a terminating decimal or a repeating decimal.

Write each as a decimal number:

$$\frac{23}{100} = 0.23$$

$$\frac{7}{4} = 1.75$$

$$\begin{array}{r} 1.75 \\ 4 \overline{) 7.000} \\ \underline{4} \\ 30 \\ \underline{28} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

$$3\frac{4}{5} = 3.8$$

$$\begin{array}{r} 3.8 \\ 5 \overline{) 19.00} \\ \underline{15} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

$$\frac{2}{3} = 0.\overline{6}$$

$$\frac{1}{3} = 0.\overline{3}$$

$$\frac{0.35}{\frac{35}{100}} = \frac{7}{20}$$

$$\frac{1.26}{\frac{126}{100}} = 1\frac{13}{50}$$

$$\frac{5}{3} = 1.\overline{6}$$

$$\frac{7}{3} = 2.\overline{3}$$

Converting percents to decimals:

Percent means "per hundred" or "hundredths" and can be written as a fraction or as a decimal.

75%

0.75

5%

0.05

A percent may be written as a decimal using the same digits but with the decimal point sifted two places to the left.

Write each percent as a decimal:

25%

0.25

125%

125.0%

1.25

2.5%

0.025

50%

.5

 $7\frac{1}{2}\%$

7.5%

.075

Assignment:

Problem Set 43

***A/B Optional Assignment: #9, 10, 11, 12, 18**