

Algebra Activity: Changing Fractions

Linda Wallace

CALCULATORS: Casio: *fx-260 Solar* • Casio: *fx-260 Solar School*

Teaching Notes

Grade Level: Middle School

Topic: Fractions and their Decimal Equivalents

Objective: To change fractions to their decimal equivalents using the $a \div b = c$ sequence of keystrokes.

Using the Activity:

The *fx-260* Virginia School Model has a disabled fraction key, so students are unable to find decimal equivalents without knowing the process for converting one form to the other. To convert a fraction to its decimal equivalent, students must use the following method.

$$\frac{a}{b} = a \div b$$

The first part of this activity provides practice with the keystrokes used to convert a fraction to its decimal equivalent. Discuss with students the repeating decimal and what it means.

Answers:

	Fraction	Decimal
1.	$\frac{5}{8}$	0.625
2.	$\frac{4}{12}$	0.333
3.	$\frac{3}{8}$	0.375
4.	$\frac{4}{5}$	0.800
5.	$\frac{2}{6}$	0.333
6.	$\frac{4}{9}$	0.444
7.	$\frac{2}{3}$	0.666
8.	$\frac{3}{5}$	0.600
9.	$\frac{4}{10}$	0.400
10.	$\frac{3}{9}$	0.333

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Teaching Notes (continued)

The second part of this activity focuses on using the basic operations with fractions and decimals.

Answers:

1. $\frac{5}{8} + \frac{3}{9} = \frac{45}{72} + \frac{24}{72} = \frac{69}{72}$ or **0.9583**

2. $\frac{4}{5} - \frac{3}{8} = \frac{32}{40} - \frac{15}{40} = \frac{17}{40}$ or **0.425**

3. $\frac{4}{10} \times \frac{3}{8} = \frac{12}{80}$ or **0.15**

4. $\frac{5}{8} \div \frac{4}{5} = \frac{25}{32}$ or **0.78125**

Discuss with students the benefits of understanding how to convert fractions to their decimal equivalents without benefit of a specific keystroke on a calculator that provides the conversion for you.

Explain to students that understanding how to convert a fraction to a decimal is an important mathematical process, and a calculator that can do it for you provides speed and accuracy when doing more complicated mathematical tasks. However, it does not replace a person's ability to reason that the calculator has done this process correctly.

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Student Worksheet

Fractions can be changed to decimal equivalents easily with the *fx-260* Virginia School Model. Use the following method to determine the equivalent decimal.

Remember that fractions mean division. $\frac{3}{4} = ?$ $3 \div 4 = 0.75$

Use your calculator to determine the decimal equivalent for each fraction. Write each decimal to the nearest thousandth.

	Fraction	Decimal
1.	$\frac{5}{8}$	
2.	$\frac{4}{12}$	
3.	$\frac{3}{8}$	
4.	$\frac{4}{5}$	
5.	$\frac{2}{6}$	
6.	$\frac{4}{9}$	
7.	$\frac{2}{3}$	
8.	$\frac{3}{5}$	
9.	$\frac{4}{10}$	
10.	$\frac{3}{9}$	

Using your table and by finding common denominators, solve the following problems. Provide answers in fraction and decimal equivalent forms.

1. $\frac{5}{8} + \frac{3}{9} =$

2. $\frac{4}{5} - \frac{3}{8} =$

3. $\frac{4}{10} \times \frac{3}{8} =$

4. $\frac{5}{8} \div \frac{4}{5} =$