Learning Objective: Students will be able to use a formal rule to divide decimals.

# Warm Up

1. $\dfrac{2}{5} - \dfrac{1}{20}$

5. $\dfrac{13}{16} - \dfrac{13}{16}$

9. $\dfrac{11}{20} - \dfrac{1}{2}$

2. $\dfrac{17}{19} - \dfrac{14}{19}$

6. $\dfrac{9}{11} - \dfrac{2}{11}$

10. $\dfrac{5}{12} - \dfrac{1}{3}$

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# Warm Up Answers

1. $\dfrac{2}{5} - \dfrac{1}{20}$

$= \dfrac{7}{20}$

2. $\dfrac{17}{19} - \dfrac{14}{19}$

$= \dfrac{3}{19}$

5. $\dfrac{13}{16} - \dfrac{13}{16}$

$= 0$

6. $\dfrac{9}{11} - \dfrac{2}{11}$

$= \dfrac{7}{11}$

9. $\dfrac{11}{20} - \dfrac{1}{2}$

$= \dfrac{1}{20}$

10. $\dfrac{5}{12} - \dfrac{1}{3}$

$= \dfrac{1}{12}$

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# Homework Answers

## 2.5 Record and Practice Journal

Multiply. Use estimation to check your answer.

1.　　0.5
　　× 4
　　　**2**

2.　　3.8
　　× 6
　　**22.8**

3.　　2.1
　　× 11
　　**23.1**

4.　　0.8
　　× 0.6
　　**0.48**

5.　　0.003
　　× 0.09
　　**0.00027**

6.　　8.91
　　× 1.26
　　**11.2266**

7.　You earn $7.80 an hour working as a dog sitter. You work 12.5 hours during the weekend. How much money do you make?

**$97.50**

8.　You use a microscope to look at bacteria that is 0.0034 millimeter long. The microscope magnifies the bacteria 430 times. How long does the bacteria appear to be when you look at it through the microscope?

**1.462 millimeters**

## Chapter 2 pages 89-91

**27**. 30.060

**29**. A fingernail grows about 3 millimeters in 30 days, 9mm in 90 days

**32**. 0.00021

**36**. 0.0000032

**42**. 117.96438

**44**.0.03822

**48**. 2.8868 million acres cropland

**56**. 2.016

**59**. 36.225

**69**.  various answers.. 4.76ft x 2 ft; 4ft x 2.38ft;  3.808ft x 2.5ft

Learning Objective: Students will be able to use a formal rule to divide decimals.

Lesson 2.6                                                                 October 31, 2016

# Essential Question:

How can you divide decimals?

Lesson 2.6                                        October 31, 2016

# Lesson Objective:

Students will be able to:

use a formal rule to divide decimals.

# Self-Evaluation Scale

| Score | Description |
|:-----:|:------------|
| 4 | I can teach other students how to use a formal rule to divide decimals. |
| 3 | I can use a formal rule to divide decimals. |
| 2 | I recognize, but still need help to use a formal rule to divide decimals. |
| 1 | I do not know how to use a formal rule to divide decimals. |

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# Key Idea

## Dividing Decimals by Whole Numbers

**Words**   Place the decimal point in the quotient above the decimal point in the dividend. Then divide as you would with whole numbers. Continue until there is no remainder.

**Numbers**
$$\begin{array}{r} 1.83 \\ 4\overline{)7.32} \end{array}$$

> Place the decimal point in the quotient above the decimal point in the dividend.

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## 1 — Dividing Decimals by Whole Numbers

**a.  Find 7.6 ÷ 4.**                         **Estimate  8 ÷ 4 = 2**

$$
\begin{array}{r}
1.9 \\
4\overline{)7.6} \\
-4 \phantom{.} \\
\hline
3\,6 \\
-3\,6 \\
\hline
0
\end{array}
$$

Place the decimal point in the quotient above the decimal point in the dividend.

∴  So, 7.6 ÷ 4 = 1.9.                **Reasonable?  1.9 ≈ 2**  ✔

**b.  Find 4.38 ÷ 12.**

$$
\begin{array}{r}
0.365 \\
12\overline{)4.380} \\
-3\,6 \phantom{0} \\
\hline
78 \phantom{0} \\
-72 \phantom{0} \\
\hline
60 \\
-60 \\
\hline
0
\end{array}
$$

Place the decimal point in the quotient above the decimal point in the dividend.

Insert a zero and continue to divide.

∴  So, 4.38 ÷ 12 = 0.365.        **Check  0.365 × 12 = 4.38**  ✔

Learning Objective: Students will be able to use a formal rule to divide decimals.

## Key Idea

### Dividing Decimals by Decimals

**Words**   Multiply the divisor *and* the dividend by a power of 10 to make the divisor a whole number. Then place the decimal point in the quotient and divide as you would with whole numbers. Continue until there is no remainder.
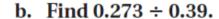
**Numbers**   $1.2\overline{)4.56}$ $\longrightarrow$ $12\overline{)45.6}$ with quotient $3.8$

Place the decimal point above the decimal point in the dividend 45.6.

Multiply each number by 10.

Learning Objective: Students will be able to use a formal rule to divide decimals.

## 2  Dividing Decimals

**a.  Find $18.2 \div 1.4$.**

$$1.4\overline{)18.2}$$

Multiply each number by 10.

$$
\begin{array}{r}
13.\phantom{0} \\
14\overline{)182.} \\
-14\phantom{2.} \\
\hline
42\phantom{.} \\
-42\phantom{.} \\
\hline
0\phantom{.}
\end{array}
$$

Place the decimal point above the decimal point in the dividend 182.

So, $18.2 \div 1.4 = 13$.　　　**Check**  $13 \times 1.4 = 18.2$ ✔

**b.  Find $0.273 \div 0.39$.**

$$0.39\overline{)0.273}$$

Multiply each number by 100.

$$
\begin{array}{r}
0.7\phantom{0} \\
39\overline{)27.3} \\
-27.3 \\
\hline
0
\end{array}
$$

So, $0.273 \div 0.39 = 0.7$.　　　**Check**  $0.7 \times 0.39 = 0.273$ ✔

Learning Objective: Students will be able to use a formal rule to divide decimals.

**③ Inserting Zeros in the Dividend and the Quotient**

**Divide 2.45 ÷ 0.007.**

$$0.007\overline{)2.450}$$

Multiply each number by 1000.
Insert a zero in the dividend.

$$\begin{array}{r} 350 \\ 7\overline{)2450} \\ -21 \\ \hline 35 \\ -35 \\ \hline 00 \end{array}$$

Because $0 \div 7 = 0$, insert a zero in the quotient.

So, $2.45 \div 0.007 = 350$.

Learning Objective: Students will be able to use a formal rule to divide decimals.

# OYO!

## Divide. Check your answer.

**11.** $3.8 \div 0.16$

**12.** $15.6 \div 0.78$

**13.** $7.2 \div 0.048$

**14.** $0.18 \div 0.003$

Learning Objective: Students will be able to use a formal rule to divide decimals.

# Assignment

Complete problems:

14, 16, 26, 27, 32, 36, 42, 44, 48, 56, 59, & 60

on pages 97 - 99 in your Big Ideas Text Book.

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Lesson 2.6                                                    October 31, 2016

# Essential Question:

How can you divide decimals?

Lesson 2.6                                          October 31, 2016

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# Homework

10/31- No HW

11/1 - 2.5 Practice In your Big Ideas Record and Practice Journal page 50.

11/2 - 2.6 Practice Big Ideas Record and Practice Journal page 54