

Lesson 3-14 – Dividing Decimals by Whole Numbers

Objectives:

- Students will divide positive integers from the multiplication table without remainders, as evidenced by them passing one-minute quizzes.
- Students will divide multi-digit whole numbers, as evidenced by them completing a warm-up worksheet where they do so.
- Students will divide decimals by whole numbers, as evidenced by them completing a homework assignment where they do so.

Student Materials on Desk Corner:

- Homework #3-13
- Homework Checker
- Warm-up & Notes Checker

Student Materials for Class:

- Homework Log
- Binder Paper
- Pencils

Teacher Materials:

- “Minute Quiz 3-14” for each student
- “Warm-up 3-14” for each student
- “Unit Calendar” transparency
- Lecture Notes for Lesson 3-14
- “Homework #3-14” handout for each student

Homework:

- Homework #3-14
- 1 hour of ALEKS due Friday (end of the grading period)

Time	Activity
10 min	<p style="text-align: center;">MINUTE QUIZ AND ATTENDANCE</p> <p>Minute Quiz and Warm-up When the bell rings, quickly go around and put the minute quiz on each student’s desk, face down. Then, start everyone on the quiz at the same time and give everyone one minute. While students are working on the quiz, pass out the warm-ups so that students can work on them once they’re done with the minute quiz. After the minute is over, have a student collect the minute quizzes and give them to the teacher’s aide (TA) to grade.</p> <p>Attendance, Collect HW, and Warm-up Check While students work on the warm-up, take attendance and have the TA collect homework & stamp homework checkers. At the end of the allotted time, go around and stamp the students’ warm-up & notes checkers.</p>
25 min	<p style="text-align: center;">LESSON</p> <p>Introduction Put up the unit calendar transparency and show students where they are in the unit. Remind students that we’ve been talking about the four operations: addition, subtraction, multiplication, and division. Last week, we learned how to add, subtract, and multiply decimals. Today, we will learn how to divide decimals.</p> <p>Notes Teach the lesson using the notes. Afterwards, stamp students’ warm-up & notes checkers.</p>
35 min	<p style="text-align: center;">CLASSWORK & ALEKS</p> <p>Give students the homework assignment as their classwork. They must do problems 1, 3, 5 before they may work on ALEKS. Remind students that when returning the laptops, they must first get them checked by you or the TA. Use this student work time to return graded homework.</p>
5 min	<p style="text-align: center;">CLEAN UP</p> <p>Students check the laptops with the teacher or the TA before putting them away. Then, they pack up, sit in their seats, and wait to be dismissed.</p>

Numeracy
Minute Quiz 3-14 A

Name:
Date: Period:

Solve the following division problems. You have exactly one minute!

$40 \div 10$

$8 \div 4$

$10 \div 5$

$44 \div 4$

$6 \div 1$

$6 \div 1$

$60 \div 5$

$8 \div 4$

$40 \div 8$

$2 \div 2$

$66 \div 6$

$32 \div 4$

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$40 \div 10$

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$10 \div 5$

$44 \div 4$

$6 \div 1$

$6 \div 1$

$60 \div 5$

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$40 \div 8$

$2 \div 2$

$66 \div 6$

$32 \div 4$

Numeracy
Minute Quiz 3-14 B

Name:
Date: Period:

Solve the following division problems. You have exactly one minute!

$7 \div 1$

$77 \div 7$

$35 \div 7$

$10 \div 1$

$30 \div 3$

$42 \div 6$

$108 \div 9$

$132 \div 11$

$36 \div 4$

$96 \div 8$

$48 \div 12$

$56 \div 7$

Numeracy
Minute Quiz 3-14 B

Name:
Date: Period:

Solve the following division problems. You have exactly one minute!

$7 \div 1$

$77 \div 7$

$35 \div 7$

$10 \div 1$

$30 \div 3$

$42 \div 6$

$108 \div 9$

$132 \div 11$

$36 \div 4$

$96 \div 8$

$48 \div 12$

$56 \div 7$

Numeracy
Minute Quiz 3-14 B

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Date: Period:

Solve the following division problems. You have exactly one minute!

$7 \div 1$

$77 \div 7$

$35 \div 7$

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$42 \div 6$

$108 \div 9$

$132 \div 11$

$36 \div 4$

$96 \div 8$

$48 \div 12$

$56 \div 7$

Numeracy
Minute Quiz 3-14 C

Name:
Date:

Period:

Solve the following division problems. You have exactly one minute!

$24 \div 8$

$6 \div 1$

$14 \div 2$

$54 \div 9$

$27 \div 9$

$10 \div 5$

$14 \div 7$

$72 \div 12$

$18 \div 9$

$27 \div 9$

$88 \div 8$

$8 \div 8$

Numeracy
Minute Quiz 3-14 C

Name:
Date:

Period:

Solve the following division problems. You have exactly one minute!

$24 \div 8$

$6 \div 1$

$14 \div 2$

$54 \div 9$

$27 \div 9$

$10 \div 5$

$14 \div 7$

$72 \div 12$

$18 \div 9$

$27 \div 9$

$88 \div 8$

$8 \div 8$

Numeracy
Minute Quiz 3-14 C

Name:
Date:

Period:

Solve the following division problems. You have exactly one minute!

$24 \div 8$

$6 \div 1$

$14 \div 2$

$54 \div 9$

$27 \div 9$

$10 \div 5$

$14 \div 7$

$72 \div 12$

$18 \div 9$

$27 \div 9$

$88 \div 8$

$8 \div 8$

Evaluate each division problem.

Ex) $125 \div 5$

$$\begin{array}{r} 25 \\ 5 \overline{)125} \\ \underline{-100} \\ 25 \\ \underline{-25} \\ 0 \end{array}$$

1) $246 \div 2$

3) $240 \div 12$

4) $345 \div 15$

5) $2340 \div 20$

6) $2583 \div 123$

Evaluate each division problem.

Ex) $125 \div 5$

$$\begin{array}{r} 25 \\ 5 \overline{)125} \\ \underline{-100} \\ 25 \\ \underline{-25} \\ 0 \end{array}$$

1) $246 \div 2$

3) $240 \div 12$

4) $345 \div 15$

5) $2340 \div 20$

6) $2583 \div 123$

Dividing Decimals by Whole Numbers

Section → Introduction

There are two types of decimal division problems:

Type 1: Decimal divided by a whole number (today).

$$\begin{array}{c} 2.4 \div 8 \\ \uparrow \quad \uparrow \\ \text{decimal} \quad \text{whole \#} \end{array}$$

Type 2: Decimal or whole number divided by a decimal (next class).

$$\begin{array}{c} 24 \div 0.8 \\ \uparrow \quad \uparrow \\ \text{decimal} \quad \text{decimal} \end{array} \quad \text{or} \quad \begin{array}{c} 24 \div 0.8 \\ \uparrow \quad \uparrow \\ \text{whole \#} \quad \text{decimal} \end{array}$$

Section → Vocabulary & Steps

$$\begin{array}{c} \text{divisor} \\ \downarrow \\ 12 \div 3 = 4 \\ \uparrow \quad \uparrow \\ \text{dividend} \quad \text{quotient} \end{array}$$

$$\begin{array}{c} \text{divisor} \quad 4 \leftarrow \text{quotient} \\ \downarrow \quad \uparrow \\ 3 \overline{)12} \\ \uparrow \\ \text{dividend} \end{array}$$

To divide a decimal number by a whole number (type 1),

Step 1: Use long division and ignore the decimal point.

Step 2: Put the decimal point in the quotient so that

it is directly above the decimal point in the dividend.

Ex: $2.4 \div 8 = ?$

$$\begin{array}{r} .3 \\ 8 \overline{)2.4} \\ \underline{-24} \\ 0 \end{array}$$

Ex: $32.4 \div 2 = ?$

$$\begin{array}{r} 16.2 \\ 2 \overline{)32.4} \\ \underline{-24} \\ 12 \\ \underline{-12} \\ 04 \\ \underline{-4} \\ 0 \end{array}$$

Ex: $16.74 \div 27 = ?$

$$\begin{array}{r} .62 \\ 27 \overline{)16.74} \\ \underline{-162} \\ 54 \\ \underline{-54} \\ 0 \end{array}$$

Ex: $60.97 \div 67 = ?$

$$\begin{array}{r} .91 \\ 67 \overline{)60.97} \\ \underline{-603} \\ 67 \\ \underline{-67} \\ 0 \end{array}$$

For each problem, divide the decimal by the whole number.

1) $4.9 \div 7$

2) $0.56 \div 8$

3) $2.16 \div 12$

4) $2.72 \div 16$

5) $184.8 \div 28$

6) $57.60 \div 90$

7) $20.80 \div 16$

8) $15.900 \div 75$

9) $18.864 \div 262$

10) $45.954 \div 222$