

Objectives:

- Students will memorize the multiplication table, as evidenced by them passing “minute quizzes.”
- Students will divide positive integers to find the quotient and remainder, as evidenced by them completing a warm-up worksheet.
- Students will convert between mixed numbers and improper fractions, as evidenced by them completing a homework assignment where they do so.

Student Materials on Desk Corner:

- Homework #2-1
- Homework Checker
- Readiness Checker

Student Materials for Class:

- Homework Log
- Binder Paper
- Pencils

Teacher Materials:

- “Warm-up 2-2” for each student
- “Minute Quiz 2-2” for each student
- “Homework #2-1” answer key and grading roster for TA
- “Homework #2-2” handout for each student

Homework:

- Homework #2-2

Time	Activity
Before Bell	<p style="text-align: center;">DO NOW</p> <p>As students enter the classroom, shake hands and give them a copy of the warm-up. Remind students that there is a minute quiz, so students need to be seated quietly with a pencil when the bell rings.</p>
5 min	<p style="text-align: center;">MINUTE QUIZ, HOMEWORK COLLECTION, AND WARM-UP</p> <p>Minute Quiz When the bell rings, quickly go around and put the minute quiz on each student’s desk, facedown. Then, start everyone on the quiz at the same time and give everyone one minute. While students are working on the quiz, stamp the readiness checkers of students who were ready when the bell rang and had their readiness checkers out.</p> <p>Homework Collection Instruct the TA go around and collect homework and stamp homework checkers. Give the TA the answer key and have him or her grade the homework that was collected.</p> <p>Warm-up After the minute quiz, students should work on the warm-up while you take attendance.</p>
30 min	<p style="text-align: center;">LESSON: MIXED NUMBERS AND IMPROPER FRACTIONS</p> <p>Notes Follow the handwritten Cornell Notes.</p> <p>Homework Pass out the “Homework #2-2” handout and have students write down the assignment on their homework logs. Remind students that you will be available after school for office hours.</p>
45 min	<p style="text-align: center;">ALEKS</p> <p>Students should continue with ALEKS. Use this student work time to return graded homework.</p>

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

$10 \cdot 12 =$

$2 \cdot 11 =$

$6 \cdot 2 =$

$4 \cdot 11 =$

$2 \cdot 6 =$

$10 \cdot 1 =$

$6 \cdot 11 =$

$3 \cdot 9 =$

$2 \cdot 12 =$

$10 \cdot 7 =$

$5 \cdot 12 =$

$4 \cdot 11 =$

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

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$6 \cdot 2 =$

$4 \cdot 11 =$

$2 \cdot 6 =$

$10 \cdot 1 =$

$6 \cdot 11 =$

$3 \cdot 9 =$

$2 \cdot 12 =$

$10 \cdot 7 =$

$5 \cdot 12 =$

$4 \cdot 11 =$

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

$6 \cdot 9 =$

$3 \cdot 5 =$

$2 \cdot 5 =$

$6 \cdot 7 =$

$8 \cdot 10 =$

$2 \cdot 9 =$

$5 \cdot 8 =$

$11 \cdot 10 =$

$11 \cdot 1 =$

$7 \cdot 11 =$

$7 \cdot 8 =$

$11 \cdot 8 =$

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

$6 \cdot 9 =$

$3 \cdot 5 =$

$2 \cdot 5 =$

$6 \cdot 7 =$

$8 \cdot 10 =$

$2 \cdot 9 =$

$5 \cdot 8 =$

$11 \cdot 10 =$

$11 \cdot 1 =$

$7 \cdot 11 =$

$7 \cdot 8 =$

$11 \cdot 8 =$

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

$6 \cdot 9 =$

$3 \cdot 5 =$

$2 \cdot 5 =$

$6 \cdot 7 =$

$8 \cdot 10 =$

$2 \cdot 9 =$

$5 \cdot 8 =$

$11 \cdot 10 =$

$11 \cdot 1 =$

$7 \cdot 11 =$

$7 \cdot 8 =$

$11 \cdot 8 =$

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

$10 \cdot 8 =$

$7 \cdot 5 =$

$2 \cdot 1 =$

$9 \cdot 10 =$

$12 \cdot 12 =$

$8 \cdot 2 =$

$4 \cdot 2 =$

$4 \cdot 2 =$

$1 \cdot 5 =$

$2 \cdot 11 =$

$6 \cdot 1 =$

$11 \cdot 5 =$

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

$10 \cdot 8 =$

$7 \cdot 5 =$

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$12 \cdot 12 =$

$8 \cdot 2 =$

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$10 \cdot 8 =$

$7 \cdot 5 =$

$2 \cdot 1 =$

$9 \cdot 10 =$

$12 \cdot 12 =$

$8 \cdot 2 =$

$4 \cdot 2 =$

$4 \cdot 2 =$

$1 \cdot 5 =$

$2 \cdot 11 =$

$6 \cdot 1 =$

$11 \cdot 5 =$

Solve the following division problems by finding the quotient and the remainder.

1) $12 \div 4$

2) $24 \div 8$

3) $25 \div 10$

4) $28 \div 3$

5) $583 \div 5$

6) $928 \div 5$

7) $583 \div 23$

8) $6937 \div 45$

Solve the following division problems by finding the quotient and the remainder.

1) $12 \div 4$

2) $24 \div 8$

3) $25 \div 10$

4) $28 \div 3$

5) $583 \div 5$

6) $928 \div 5$

7) $583 \div 23$

8) $6937 \div 45$

Improper Fractions

Section → Intro

Say you ate $2\frac{1}{4}$ pizzas, and every pizza has 4 slices:



You can write this as a fraction:

$$\frac{\text{\# of slices}}{\text{\# of slices in a pizza}} = \frac{2 \cdot 4 + 1}{4} = \frac{8 + 1}{4} = \frac{9}{4}$$

This is called an improper fraction. An improper fraction has (top #) \geq (bottom #).

Section → Mixed Number → Improper Fraction

Ex: Write $2\frac{3}{8}$ as an improper fraction.

$$2\frac{3}{8} = \text{two pizzas (circles with 8 slices each) and 3 slices (triangles)} = \frac{2 \cdot 8 + 3}{8} = \frac{16 + 3}{8} = \frac{19}{8}$$

$$\text{Ex: } 1\frac{2}{4} = \text{one pizza (circle with 4 slices) and 2 slices (triangles)} = \frac{1 \cdot 4 + 2}{4} = \frac{4 + 2}{4} = \frac{6}{4}$$

$$\text{Ex: } 38\frac{1}{2} = \frac{38 \cdot 2 + 1}{2} = \frac{76 + 1}{2} = \frac{77}{2}$$

Section → Improper Fraction → Mixed Number

Ex: Write $\frac{7}{3}$ as a mixed number.

$$\frac{7}{3} = \text{two pizzas (circles with 3 slices each) and 1 slice (triangle)} = 2\frac{1}{3}$$

$$\text{Ex: } \frac{5}{4} = \text{one pizza (circle with 4 slices) and 1 slice (triangle)} = 1\frac{1}{4}$$

Ex: $\frac{90}{4} = \underbrace{\bigoplus \dots \bigoplus}_{22 \text{ of these}} \Delta \Delta = 22\frac{2}{4}$

$$\begin{array}{r} 22 \\ 4 \overline{)90} \\ \underline{-8} \\ 10 \\ \underline{-8} \\ 2 \end{array}$$

22 of these



$$\frac{P}{H} = 1 + \frac{8}{4} = \frac{1+8}{4} = \frac{9}{4}$$

This is called an improper fraction. An improper fraction has (top #) > (bottom #)

Mixed Number \rightarrow Improper Fraction

Ex: Write $2\frac{3}{8}$ as an improper fraction

$$2\frac{3}{8} = \frac{2 \times 8 + 3}{8} = \frac{16+3}{8} = \frac{19}{8}$$

$$2\frac{3}{8} = \frac{16}{8} + \frac{3}{8} = \frac{16+3}{8} = \frac{19}{8}$$

Improper Fraction \rightarrow Mixed Number

Improper Fraction \rightarrow Mixed Number

Ex: Write $\frac{7}{3}$ as a mixed number

$$\frac{7}{3} = 2\frac{1}{3}$$

$$\frac{7}{3} = 2 + \frac{1}{3} = 2\frac{1}{3}$$

Part 1: Convert the following mixed numbers into improper fractions. An example has been done for you.

Ex.) $2\frac{3}{4} = \frac{2 \cdot 4 + 3}{4} = \frac{8 + 3}{4} = \frac{11}{4}$

1) $3\frac{6}{7}$

2) $1\frac{1}{2}$

3) $6\frac{7}{10}$

4) $2\frac{4}{5}$

5) $4\frac{2}{6}$

Part 2: Convert the following improper fractions into mixed numbers. An example has been done for you.

Ex.) $\frac{7}{3}$ $3 \overline{)7} \Rightarrow \frac{7}{3} = 2\frac{1}{3}$

6) $\frac{12}{7}$

7) $\frac{24}{5}$

8) $\frac{79}{9}$

9) $\frac{68}{6}$

10) $\frac{23}{4}$