**Objectives:**

- Students will memorize the multiplication table, as evidenced by them passing "minute quizzes."
- Students will compare fractions by finding the least common denominator, as evidenced by them completing a homework assignment where they do so.
- Students will add and subtract fractions with common denominators, as evidenced by them completing a homework assignment where they do so.
- Students will add and subtract fractions with differing denominators, as evidenced by them completing a homework assignment where they do so.

**Student Materials on Desk Corner:**

- Homework #2-9
- Homework Checker
- Readiness Checker

**Student Materials for Class:**

- Homework Log
- Binder Paper
- Pencils

**Teacher Materials:**

- "Warm-up 2-10" for each student
- "Minute Quiz 2-10" for each student
- "Homework #2-9" answer key and grading roster for TA
- "Homework #2-10" handout for each student

**Homework:**

- Homework #2-10

| Time | Activity |
|---|---|
| Before Bell | **DO NOW**<br><br>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. |
| 5 min | **MINUTE QUIZ, HOMEWORK COLLECTION, AND WARM-UP**<br><br>**Minute Quiz**<br>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.<br><br>**Homework Collection**<br>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.<br><br>**Warm-up**<br>After the minute quiz, students should work on the **warm-up** while you take **attendance**. |
| 35 min | **LESSON: SIMPLIFYING FRACTIONS**<br><br>**Notes**<br>Follow the handwritten Cornell Notes.<br><br>**Homework**<br>Pass out the ""Homework #2-10" handout and have students write down the assignment on their homework logs. |
| 40 min | **ALEKS**<br><br>Students should continue with **ALEKS**. Use this student work time to **return graded homework**. |

Numeracy Name:
Minute Quiz 2-10 A Date: Period:

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

| | | |
|---|---|---|
| 1 • 11 = | 7 • 10 = | 8 • 2 = |
| 11 • 12 = | 10 • 6 = | 10 • 11 = |
| 10 • 6 = | 2 • 1 = | 1 • 9 = |
| 3 • 4 = | 1 • 9 = | 4 • 8 = |

Numeracy Name:
Minute Quiz 2-10 A Date: Period:

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

| | | |
|---|---|---|
| 1 • 11 = | 7 • 10 = | 8 • 2 = |
| 11 • 12 = | 10 • 6 = | 10 • 11 = |
| 10 • 6 = | 2 • 1 = | 1 • 9 = |
| 3 • 4 = | 1 • 9 = | 4 • 8 = |

Numeracy Name:
Minute Quiz 2-10 A Date: Period:

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

| | | |
|---|---|---|
| 1 • 11 = | 7 • 10 = | 8 • 2 = |
| 11 • 12 = | 10 • 6 = | 10 • 11 = |
| 10 • 6 = | 2 • 1 = | 1 • 9 = |
| 3 • 4 = | 1 • 9 = | 4 • 8 = |

Numeracy
Minute Quiz 2-10 B

Name:
Date: Period:

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

| | | |
|---|---|---|
| 1 • 1 = | 1 • 7 = | 4 • 8 = |
| 2 • 5 = | 12 • 7 = | 11 • 4 = |
| 6 • 12 = | 5 • 3 = | 3 • 3 = |
| 7 • 8 = | 6 • 6 = | 11 • 5 = |

Numeracy
Minute Quiz 2-10 B

Name:
Date: Period:

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

| | | |
|---|---|---|
| 1 • 1 = | 1 • 7 = | 4 • 8 = |
| 2 • 5 = | 12 • 7 = | 11 • 4 = |
| 6 • 12 = | 5 • 3 = | 3 • 3 = |
| 7 • 8 = | 6 • 6 = | 11 • 5 = |

Numeracy
Minute Quiz 2-10 B

Name:
Date: Period:

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

| | | |
|---|---|---|
| 1 • 1 = | 1 • 7 = | 4 • 8 = |
| 2 • 5 = | 12 • 7 = | 11 • 4 = |
| 6 • 12 = | 5 • 3 = | 3 • 3 = |
| 7 • 8 = | 6 • 6 = | 11 • 5 = |

Numeracy
Minute Quiz 2-10 C

Name:
Date: Period:

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

| | | |
|---|---|---|
| 8 • 8 = | 8 • 5 = | 8 • 11 = |
| 6 • 10 = | 12 • 7 = | 1 • 8 = |
| 1 • 8 = | 8 • 12 = | 11 • 7 = |
| 5 • 2 = | 10 • 7 = | 3 • 9 = |

Numeracy
Minute Quiz 2-10 C

Name:
Date: Period:

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

| | | |
|---|---|---|
| 8 • 8 = | 8 • 5 = | 8 • 11 = |
| 6 • 10 = | 12 • 7 = | 1 • 8 = |
| 1 • 8 = | 8 • 12 = | 11 • 7 = |
| 5 • 2 = | 10 • 7 = | 3 • 9 = |

Numeracy
Minute Quiz 2-10 C

Name:
Date: Period:

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

| | | |
|---|---|---|
| 8 • 8 = | 8 • 5 = | 8 • 11 = |
| 6 • 10 = | 12 • 7 = | 1 • 8 = |
| 1 • 8 = | 8 • 12 = | 11 • 7 = |
| 5 • 2 = | 10 • 7 = | 3 • 9 = |

Numeracy Name:
Warm-up 2-10 Date: Period:

**Determine if the first fraction is less than (<), equal to (=), or greater than (>) the second fraction. Do this by finding the least common multiple of the denominators and then finding equivalent fractions and comparing them.**

1) $\frac{10}{12}$ and $\frac{7}{9}$

2) $\frac{2}{5}$ and $\frac{1}{2}$

3) $\frac{2}{10}$ and $\frac{1}{4}$

4) $\frac{1}{3}$ and $\frac{4}{12}$

Numeracy Name:
Warm-up 2-10 Date: Period:

**Determine if the first fraction is less than (<), equal to (=), or greater than (>) the second fraction. Do this by finding the least common multiple of the denominators and then finding equivalent fractions and comparing them.**

1) $\frac{10}{12}$ and $\frac{7}{9}$

2) $\frac{2}{5}$ and $\frac{1}{2}$

3) $\frac{2}{10}$ and $\frac{1}{4}$

4) $\frac{1}{3}$ and $\frac{4}{12}$

Tom Wong
11/3/08

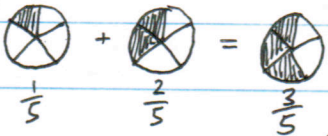
# Adding and Subtracting Fractions

Section → **Adding and Subtracting Fractions with Common Denominators**

Recall fractions with common denominators have bottom numbers that are the same. So, their slices are the same size.

To add and subtract them, just add and subtract their numerators (add and subtract how many slices we have). Then, simplify.

Ex: Evaluate $\frac{1}{5}+\frac{2}{5}$.



$\frac{1}{5}$ $\frac{2}{5}$ $\frac{3}{5}$

Now, simplify.

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

So, $\frac{1}{5}+\frac{2}{5}=\boxed{\frac{3}{5}}$

Ex: Evaluate $\frac{7}{9}-\frac{1}{9}$.

$$\frac{7}{9}-\frac{1}{9}=\frac{7-1}{9}=\frac{6}{9}$$

Now, simplify.

$\frac{6}{9}=\frac{2\cdot 3}{3\cdot 3}=\frac{2}{3}$

So, $\frac{7}{9}-\frac{1}{9}=\boxed{\frac{2}{3}}$

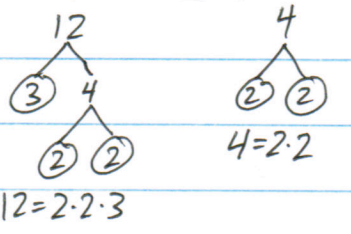
Section → **Adding and Subtracting Fractions with Differing Denominators**

Recall fractions with differing denominators have bottom numbers that are not the same. So, their slices are not the same size.

To add and subtract them, we find equivalent fractions with common denominators and then add and subtract them. Then, simplify.

Ex: Evaluate $\frac{5}{12} + \frac{1}{4}$.

First, find the lcm(12, 4).




$12 = 2 \cdot 2 \cdot 3$ $\quad 4 = 2 \cdot 2$

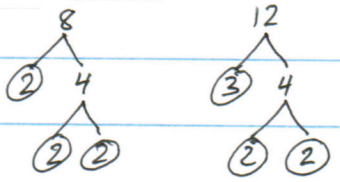
$\text{lcm}(12, 4) = 2 \cdot 2 \cdot 3 = 4 \cdot 3 = 12$

Then, find equivalent fractions and add.

$\frac{5}{12}$

$\frac{1}{4} = \frac{1 \cdot 3}{4 \cdot 3} = \frac{3}{12}$ $\quad \frac{5}{12} + \frac{3}{12} = \frac{8}{12}$

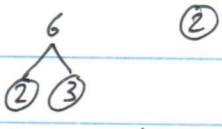
Now, simplify the result.




$\frac{8}{12} = \frac{2 \cdot 2 \cdot 2}{2 \cdot 2 \cdot 3} = \boxed{\frac{2}{3}}$

Ex: Evaluate $\frac{5}{6} - \frac{1}{2}$.

First, find the lcm(6, 2).




$\text{lcm}(6, 2) = 2 \cdot 3 = 6$

Then, find equivalent fractions and subtract.

$\frac{5}{6}$

$\frac{1}{2} = \frac{1 \cdot 3}{2 \cdot 3} = \frac{3}{6}$ $\frac{5}{6} - \frac{3}{6} = \frac{2}{6}$.

Now, simplify the result.

(2)

$2 = 2$

6

(2) (3)

$6 = 2 \cdot 3$

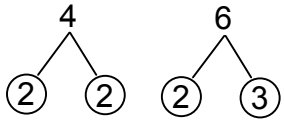
$\frac{2}{6} = \frac{2}{2 \cdot 3} = \boxed{\frac{1}{3}}$

Numeracy Name:
Homework #2-10 – Adding & Subtracting Fractions Date: Period:

**Add the following fractions. You may first have to find equivalent fractions with common denominators. Be sure to simplify your answer.**

Ex.) $\frac{1}{4}+\frac{5}{6}$

First, find lcm(4,6), which is the best common denominator to use.




$4=2\cdot 2 \qquad 6=2\cdot 3$

$\text{lcm}(4,6)=2\cdot 2\cdot 3=12.$

Then, find equivalent fractions and add.

$$\frac{1}{4}=\frac{1\cdot 3}{4\cdot 3}=\frac{3}{12}$$
$$\frac{5}{6}=\frac{5\cdot 2}{6\cdot 2}=\frac{10}{12}$$
$$\frac{3}{12}+\frac{10}{12}=\frac{13}{12}$$

Now, simplify.

$$12\overline{)13}\ \Rightarrow\ \frac{13}{12}=\boxed{1\frac{1}{12}}$$
$$\frac{12}{1}$$

1) $\frac{3}{8}+\frac{1}{2}$

2) $\frac{7}{12}+\frac{5}{8}$

3) $\frac{1}{4}+\frac{2}{3}$

more on back

**Subtract the following fractions. You may first have to find equivalent fractions with common denominators. Be sure to simplify your answer.**

4) $\frac{9}{6} - \frac{9}{8}$

5) $\frac{2}{3} - \frac{2}{9}$

6) $\frac{11}{24} - \frac{3}{8}$

7) $\frac{5}{6} - \frac{2}{5}$