Objectives:

- Students will memorize the multiplication table, as evidenced by them passing "minute quizzes."
- Students will find equivalent fractions, as evidenced by them completing a warm-up worksheet 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 #2-26
- Homework Checker
- Readiness Checker

Student Materials for Class:

- Homework Log
- Binder Paper
- Pencils

Teacher Materials:

- "Warm-up 2-27" for each student
- "Minute Quiz 2-27" for each student
- "Homework #2-26" answer key and grading roster for TA
- "Homework #2-27" handout for each student

Homework:

- Finish Homework #2-27
- ALEKS

Time	Activity
10 min	**MINUTE QUIZ, WARM-UP, HOMEWORK COLLECTION, AND ATTENDANCE** **Minute Quiz and Warm-up** 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, pass out the **warm-ups** so that students can work on them once they're done with the minute quiz. Also, stamp the **readiness checkers** of students who were ready when the bell rang and had their readiness checkers out. **Homework Collection and Attendance** 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. During this time, take **attendance**. **Warm-up & Notes Checker** Once all the homework is collected, go around and stamp the students' "Warm-up and Notes Checkers."
25 min	**LESSON: ADDING DIFFERING DENOMINATORS** **Notes** Follow the handwritten Cornell Notes. Once students are finished, go around and stamp the students' "Warm-up and Notes Checkers."
20 min	**CLASSWORK** Pass out the **homework/classwork** handout and have students write down the assignment on their homework logs. Have the TA pass out **fraction circles** and write own which student has which set of fraction circles. Students should use the fraction circles to complete Homework #2-26, which will serve as the classwork.
25 min	**ALEKS** When students finish their classwork, they should continue with **ALEKS**. Use this student work time to **return graded homework**.

Numeracy Name:
Minute Quiz 2-27 A Date: Period:

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

10 • 12 =	6 • 8 =	6 • 8 =
12 • 7 =	1 • 7 =	8 • 7 =
8 • 5 =	3 • 10 =	8 • 11 =
4 • 5 =	11 • 1 =	3 • 9 =

Numeracy Name:
Minute Quiz 2-27 A Date: Period:

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

10 • 12 =	6 • 8 =	6 • 8 =
12 • 7 =	1 • 7 =	8 • 7 =
8 • 5 =	3 • 10 =	8 • 11 =
4 • 5 =	11 • 1 =	3 • 9 =

Numeracy Name:
Minute Quiz 2-27 A Date: Period:

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

10 • 12 =	6 • 8 =	6 • 8 =
12 • 7 =	1 • 7 =	8 • 7 =
8 • 5 =	3 • 10 =	8 • 11 =
4 • 5 =	11 • 1 =	3 • 9 =

Numeracy
Minute Quiz 2-27 B

Name:
Date: Period:

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

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

Numeracy
Minute Quiz 2-27 B

Name:
Date: Period:

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

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

Numeracy
Minute Quiz 2-27 B

Name:
Date: Period:

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

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

Numeracy
Minute Quiz 2-27 C

Name:
Date: Period:

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

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

Numeracy
Minute Quiz 2-27 C

Name:
Date: Period:

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

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

Numeracy
Minute Quiz 2-27 C

Name:
Date: Period:

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

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

Numeracy
Warm-up 2-27

Name:
Date: Period:

Fill in the blanks so that the following fractions are equivalent.

1) $\frac{3}{5} = \frac{[\ \ ]}{20}$

2) $\frac{[\ \ ]}{5} = \frac{48}{40}$

3) $\frac{6}{8} = \frac{[\ \ ]}{4}$

4) $\frac{2}{[\ \ ]} = \frac{6}{21}$

5) $\frac{11}{6} = \frac{44}{[\ \ ]}$

6) $\frac{4}{7} = \frac{28}{[\ \ ]}$

7) $\frac{[\ \ ]}{12} = \frac{33}{36}$

8) $\frac{10}{[\ \ ]} = \frac{50}{35}$

9) $\frac{42}{[\ \ ]} = \frac{84}{100}$

10) $\frac{17}{20} = \frac{[\ \ ]}{100}$

11) $\frac{12}{18} = \frac{[\ \ ]}{3}$

12) $\frac{7}{3} = \frac{[\ \ ]}{24}$

Numeracy
Warm-up 2-27

Name:
Date: Period:

Fill in the blanks so that the following fractions are equivalent.

1) $\frac{3}{5} = \frac{[\ \ ]}{20}$

2) $\frac{[\ \ ]}{5} = \frac{48}{40}$

3) $\frac{6}{8} = \frac{[\ \ ]}{4}$

4) $\frac{2}{[\ \ ]} = \frac{6}{21}$

5) $\frac{11}{6} = \frac{44}{[\ \ ]}$

6) $\frac{4}{7} = \frac{28}{[\ \ ]}$

7) $\frac{[\ \ ]}{12} = \frac{33}{36}$

8) $\frac{10}{[\ \ ]} = \frac{50}{35}$

9) $\frac{42}{[\ \ ]} = \frac{84}{100}$

10) $\frac{17}{20} = \frac{[\ \ ]}{100}$

11) $\frac{12}{18} = \frac{[\ \ ]}{3}$

12) $\frac{7}{3} = \frac{[\ \ ]}{24}$

Numeracy
Lesson 2-27

Tom Wong
12/19/08

Adding Differing Denominators without Fraction Circles

Section → Introduction

Last time, we learned that any common multiple of the denominators will work as same sized pieces.

Ex: $\frac{1}{2} + \frac{1}{3} = \begin{cases} \nearrow \frac{5}{6} \\ \searrow \frac{10}{12} \end{cases}$

6 and 12 are common multiples of 2 and 3.

Since small numbers are easier to use than big numbers, we want to use the least common multiple (lcm).

Today, we will use lcm's to add fractions with differing denominators without fraction circles.

Section → How to Add

To add fractions with differing denominators,

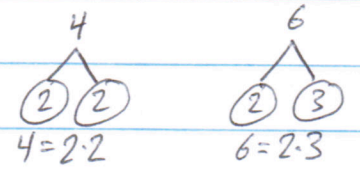
Step 1: Find the least common multiple of the denominators. This gives us what same sized pieces to use.

Step 2: Make same sized pieces by finding equivalent fractions. Then, add.

Step 3: Simplify.

Ex: $\frac{1}{4} + \frac{5}{6} = ?$

Step 1: Find lcm(4,6).



$lcm(4,6) = 2 \cdot 2 \cdot 3 = 4 \cdot 3 = 12$

Step 2: Make same sized pieces and then add.

$$\frac{1}{4} = \frac{1 \cdot 3}{4 \cdot 3} = \frac{3}{12}$$

$$\frac{5}{6} = \frac{5 \cdot 2}{6 \cdot 2} = \frac{10}{12}$$

$$\frac{3}{12} + \frac{10}{12} = \frac{13}{12}$$

Step 3: Simplify

$$12\overline{)13} \quad 1 \leftarrow \text{\# of whole pizzas}$$

$$-12$$

$$1 \leftarrow \text{\# of slices remaining}$$

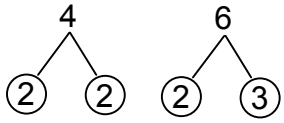
$$\Rightarrow \quad \frac{13}{12} = \boxed{1\frac{1}{12}}$$

Numeracy Name:
Homework #2-27 – Adding & Subtracting Fractions Date: Period:

Add the following fractions by finding equivalent fractions with common denominators. Then, 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.

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

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 by finding equivalent fractions with common denominators. Then, 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) $\frac{5}{6} - \frac{2}{5}$