Lesson Objective: List the factors of two whole numbers, each of which is less than 100, and identify their greatest common factor.

Vocabulary Box

greatest common factor (GCF) — The largest number that divides evenly into two or more numbers. Example: The **GCF** of 10 and 15 is 5.

Independent Practice

<u>Directions</u>: Complete the following practice problems on your own. Your teacher will review the answers. Make sure you show all your work.

I. List all of the factors of each number.

    1. 63

    2. 55

    3. 36

II. Find the GCF for each pair of numbers.

    1. 50 and 75

    2. 36 and 54

    3. 78 and 26

III. Match each pair of numbers with its GCF.

1. _____ 70 and 14   a. 7

2. _____ 28 and 21   b. 14

3. _____ 35 and 50   c. 5

BONUS?

Directions: Fill in the blank. List all possible answers between 1 and 99.

1. The GCF of _____ and 14 is 7.

   Possible answers are: _____

2. The GCF of _____ and 81 is 9.

   Possible answers are: _____

Problem Solving

Directions: Solve the problems below.

1. Mr. Jackson is the director of the school marching band. The band is playing at tonight's football game, during the half-time show. Mr. Jackson needs seats in the stadium for his band and the opposing team's band. Section A of the stadium has 16 seats in each row. Section B has 20 seats in each row. Section C has 24 seats in each row. The home team's band has 72 members. The opposing team's band has 48 members. Both bands have to sit in the same section. In which section should Mr. Jackson seat them if each band is to fill every row (no extra seats at the end of the row)?

2. The high school baseball team has won 18 of its 36 games. A newspaper reporter is doing a story on the team. She wants to report the fraction of games won, in simplest form. HINT: The fastest way to write a fraction in simplest form is to divide the numerator and denominator by their GCF.

   Write $\dfrac{18}{36}$ in simplest form.

3. A concession stand worker is trying to arrange a display of potato chips. There are 50 bags to display in even rows (same number of bags in each row). How many ways can he display them?

1. List the factors of 18.

2. What is the GCF of 80 and 18?

3. What is the GCF of 90 and 45?

Lesson Objective: Compare and order fractions and mixed numbers.

Vocabulary Box

mixed number — A number that contains a whole number and a fraction.

Example: $2\frac{3}{4}$ is a mixed number. 2 is the whole number and $\frac{3}{4}$ is the fraction.

least common denominator (LCD) — The least number, other than zero, that is a multiple of the denominators of two or more fractions; sometimes referred to as the LCM, least common multiple.

Example: 18 is the LCD for $\frac{1}{6}$ and $\frac{1}{9}$.

Guided Practice

I. Solve with a partner. For questions 1 and 2, insert <, >, or = into the blank.

1. $\frac{4}{5}$ _____ $\frac{6}{10}$

2. $\frac{6}{12}$ _____ $\frac{3}{6}$

3. Order $2\frac{2}{3}, 3\frac{1}{2}, 2\frac{3}{4}$ from least to greatest.

II. Solve each problem on your own. For questions 1–3, fill in the blank with <, >, or =. For questions 4 and 5, order from least to greatest.

1. $\frac{7}{10}$ _____ $\frac{13}{15}$

2. $\frac{5}{7}$ _____ $\frac{2}{3}$

3. $\dfrac{1}{3}$ —— $\dfrac{15}{45}$

4. $\dfrac{5}{8}, \dfrac{3}{4}, \dfrac{2}{3}$

5. $5\dfrac{7}{9}, 5\dfrac{5}{6}, 4\dfrac{2}{3}$

 Summary/Closure

A. Vocabulary Words

1. What is a least common denominator?

2. What is a mixed number?

B. Summarize What We Learned Today

Order the fractions from least to greatest. Explain your work.

$\dfrac{5}{8}, \dfrac{9}{12}, \dfrac{5}{6}$

BONUS?

I. Compare the following pairs of fractions. Insert <, >, or = into the blank.

1. $\dfrac{7}{9}$ —— $\dfrac{5}{6}$

2. $\dfrac{5}{8}$ —— $\dfrac{4}{5}$

3. $\dfrac{3}{13}$ —— $\dfrac{9}{39}$

4. $\dfrac{4}{5}$ —— $\dfrac{3}{4}$

II. Compare each pair of mixed numbers.

1. $7\dfrac{3}{10}$ —— $7\dfrac{2}{5}$

2. $1\dfrac{5}{7}$ —— $1\dfrac{10}{14}$

Problem Solving

1. The Bluebirds won $\dfrac{4}{6}$ of their soccer games and the Rangers won $\dfrac{3}{4}$ of their games. They both played the same number of games. Who won more games? Explain your answer.

2. Kim and Karen went to the movies and each bought a medium-sized popcorn. Before the movie started, Kim ate $\dfrac{1}{8}$ of her popcorn and Karen ate $\dfrac{2}{5}$ of her popcorn. Who has more popcorn left, Kim or Karen? Explain your answer.

3. Mary used $\dfrac{2}{3}$ pound of nuts for chocolate chip cookies and $\dfrac{3}{4}$ pound of nuts for banana bread. Which recipe called for more nuts?

4. It rained $\dfrac{7}{10}$-inch on Monday, $\dfrac{3}{4}$-inch on Wednesday, and $\dfrac{6}{10}$-inch on Saturday. On which day did it rain the most?

I. Compare each pair of fractions. Insert <, >, or = into the blank.

1. $\dfrac{3}{7}$ ___ $\dfrac{5}{6}$

2. $\dfrac{2}{3}$ ___ $\dfrac{8}{12}$

II. Order the following fractions and mixed numbers from least to greatest.

3. $2\dfrac{1}{4}$, $2\dfrac{3}{7}$, $3\dfrac{1}{3}$, $2\dfrac{3}{4}$

LESSON OBJECTIVE:
Compare and order fractions and mixed numbers.

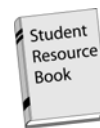| Fact Practice	Review	Independent Practice	Problem Solving	Closure
5 mins.	7 mins.	15 mins.	15 mins.	5 mins.

Lesson:
- ❑ Student Resource Books: Student Resource Sheets (Lesson 12)
- ❑ Dry-erase boards and dry-erase markers

Fact Practice:
(Select one of these sets of materials for the Math Facts Games.)

- ❑ Individual Student Flashcards
- ❑ Buzz
- ❑ Math War or Salute!
  - Playing cards
- ❑ Soccer Ball Facts
  - Soccer ball
- ❑ Math Scramble
  - Index cards, each with a number 0–9; cards with the operations
- ❑ BINGO
  - Flashcards
  - BINGO boards, and tokens or colored squares
- ❑ Around the World
  - Triangle or regular flashcards

Vocabulary Definitions:
This lesson assumes that students know the following vocabulary words:
- numerator
- denominator
- simplest form

mixed number — A number that contains a whole number and a fraction.

Example: $2\frac{3}{4}$ is a mixed number. 2 is the whole number and $\frac{3}{4}$ is the fraction.