

Activity 3

Factors Galore B: Get the Low Down

Students practice simplifying fractions in a game format by dividing the numerator and denominator by the greatest common factor.

Activity

Note: Before beginning this activity, make sure the calculator is set to **Mansimp**. To do this:

1. Press **[MODE]** and use the arrows to move down to **b/c** and press **[ENTER]**.
2. Press **[↓]** to move to **Mansimp** and press **[ENTER]**.
3. Press **[2nd]** **[QUIT]** to return to the Home screen.

Write an unsimplified fraction (such as $\frac{20}{30}$) on the board, and ask the students if it is in its simplest form. Guide the students through a discussion of why it is not simplified and how to simplify it. Remind students what a greatest common factor (GCF) is.

Pass out the Student Activity sheets. Have students work in pairs. One student predicts the greatest common factor of the numerator and denominator of a fraction and records it in the table. The other student uses the calculator to check this.

1. Type the numerator, press **[b/c]**, type the denominator.
2. Press **[SIMP]**, type the guess for the GCF, and press **[ENTER]**.

Concept

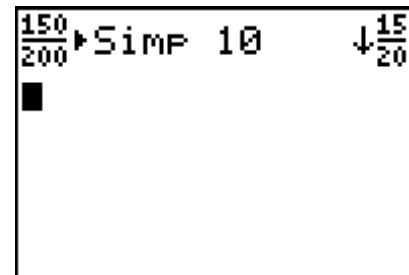
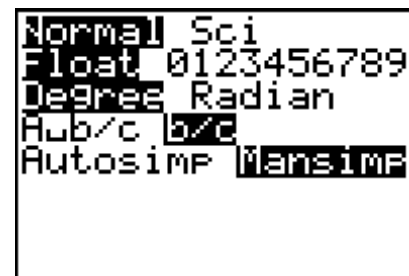
- ◆ Number sense
- ◆ Rules of divisibility

Skills

- ◆ Finding common factors
- ◆ Finding greatest common factors
- ◆ Simplifying fractions
- ◆ Mental math
- ◆ Calculator skills: Mode, **[b/c]**, **[SIMP]**

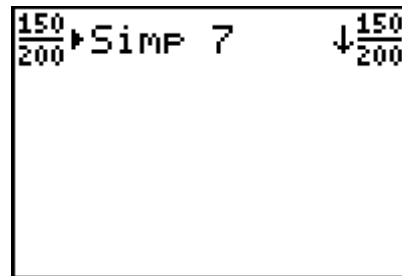
Materials

- ◆ Student Activity sheets (page 13)
- ◆ TI-73 calculators



- ◆ If the arrow disappears, the guess is the greatest common factor and they earn 3 points.
- ◆ If an arrow does appear, the fraction is not simplified completely, and the student starts over by entering the original fraction and making a new guess. This guess should also be recorded on the Student Activity sheet.
- ◆ Students earn 2 points for getting it right on the second try and 1 point if they get it right on the third try. They should take turns guessing, and after all the fractions are simplified, total their points to determine who has the highest score.

Tip: If students get the same fraction back when they entered their guess for GCF, they entered a number that was not a common factor. Example:



Wrap-Up

Ask students:

- ◆ *How did you choose your estimates?*
- ◆ *What does the calculator do with the guess you entered? (It divides the numerator and denominator by that number.)*
- ◆ *When did you know your guess was the GCF? (When the arrow disappeared)*

Assessment

Have students answer the questions at the bottom of the Student Activity sheet.

Extension

- ◆ Give the students a new set of numbers and have them try to get the simplified fraction in just one try.



Name _____

Date _____

Activity 3

Factors Galore B: Get the Low Down

Guess the greatest common factor of the numerator and denominator of a fraction and record it in the table. Use the calculator to check your answer. Record your points.

FRACTION	GCF guess #1	GCF guess #2	GCF guess #3	POINTS
$\frac{150}{200}$				
$\frac{48}{16}$				
$\frac{60}{90}$				
$\frac{27}{81}$				
$\frac{16}{48}$				
$\frac{21}{56}$				
$\frac{15}{40}$				
$\frac{22}{273}$				
$\frac{28}{384}$				
			TOTAL POINTS	

1. Why did you choose the numbers you chose?

2. What does the calculator do with the guess you entered?

3. When did you know your guess was the GCF?

4. Write the strategies you used to guess the greatest common factor.
