

Name: _____ Date: _____

A Simple Discovery

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Greatest Common Factor

EXTRA!!!

Students Discover Way to Find GCF using **SIMP** Key

by Tim Evans

Last Friday, students in Mr. Frie's math class discovered that they could use **SIMP** key on their calculators to find the greatest common factor of two numbers. One of Mr. Frie's students, Cheryl Anderson, said, "We wanted to come up with a quick and accurate way to find the GCF. This idea is a great one and will make our work a lot easier! "

How do you think Mr. Frie's class did this? Test your ideas on the pairs of numbers below. Then explain why your method works. (Hint: Write the two numbers as a fraction.)

1. 12, 72

2. 45, 60

3. 72, 48

4. 90, 130

5. 18, 36

6. 28, 63

7. 230, 355

8. 120, 320

9. 138, 300

10. 162, 360

Thinking Cap

Mr. Frie's students also came up with a way to check their work on the calculators using the GCF and the final fraction for each pair of numbers. How did they do this?

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Objective: To use the calculator to find the greatest common factors of pairs of numbers.

NCTM Standards: Mathematics as Reasoning; Number and Number relationships

Using the Activity

Students use the calculator in this activity to discover a way to find the greatest common factor of the numbers using the **SIMP** key.

The **SIMP** key can be used to enter the two numbers as a fraction.

The **SIMP** key can be used to reduce the fraction to find the GCF.

Example For exercise 1 , enter 12 **SIMP** 72 to enter the two numbers as a fraction. Then press **SIMP** , and a 2 will appear on the display followed by $\frac{6}{36}$. Record the 2. Press **SIMP** and again a 2 will appear on the display followed by $\frac{3}{18}$. Record Press **SIMP** and a 3 will appear on the display followed by $\frac{1}{6}$. Record the the 2. Press **SIMP** again, and nothing happens. This means that the fraction has 3. Press been simplified completely. To find the GCF, multiply the three recorded numbers. The GCF of 12 and 72 is 12.

Assessment Encourage students to divide each number by the GCF. If their answer is correct, the GCF of the two quotients will be 1 .

Answers

1. 12 2. 15 3. 24 4. 10 5. 18 6. 7 7. 5 8. 40 9. 6 10. 18

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Answer

Multiply the final fraction by the fraction formed by the GCF over itself. If the GCF is correct, the result should be the fraction formed by the original two numbers.