Topic #

Reducing Fractions

Date

Warmup: Answer the warmup questions **before** watching the video solutions.

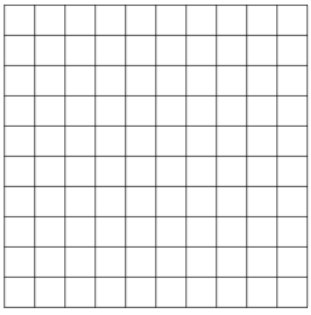
1. What are the factors of 68?

2. What is the GCF of 24 and 84?

3. What are the factors of 78?

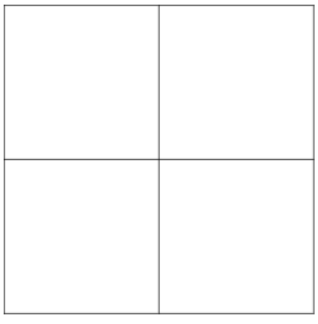
4. Find the prime factorization of 156. (Use a Factor Tree)

5. Use the division method to calculate the prime factorization of 168.



Color $\frac{25}{100}$ red.

Color $\frac{1}{4}$ red.



I. Reducing a Fraction using GCF

Reduced Fraction (Simplest Form): A fraction written such that the GCF of the numerator and denominator is one. The fraction and the reduced fraction are equal in value.

To write a fraction in reduced form:

1. **Determine the GCF of the numerator and denominator**
2. **Divide the numerator by the GCF**
3. **Divide the denominator by the GCF**

Reduce the fraction $\frac{25}{100}$

The GCF of 25 and 100 is

The numerator is

The denominator is

Reduce $\frac{24}{84}$

Reduce $\frac{68}{78}$

6. Write $\frac{12}{28}$ in reduced form.

7. Write $\frac{18}{42}$ in reduced form.

8. Write $\frac{6}{8}$ in reduced form.

II. Reducing a Fraction using the Prime Factorization

$\frac{8}{8} = \frac{1}{1} = 1$ $\frac{(2)(2)(2)}{(2)(2)(2)} = \frac{1}{1} = 1$

To Reduce a Fraction using the Prime Factorization:

1. List the prime factors of the numerator
2. List the prime factors of the denominator
3. Cross out the common factors
4. Multiply the remaining factors in the numerator, this is the numerator.
5. Multiply the remaining factors of the denominator, this is the denominator.

Reduce the fraction $\frac{25}{100}$

$\frac{\textit{prime factors of } 25}{\textit{prime factors of } 100} = \_\_\_\_\_ = \_\_\_\_\_$

Reduce $\frac{156}{168}$ (Using Prime Factorization)

Reduce $\frac{6}{8}$ (Using Prime Factorization)

9. Write $\frac{18}{42}$ in reduced form. (Using Prime Factorization)

10. Write $\frac{8}{52}$ in reduced form. (Using Prime Factorization)

III. Practice: