

Name _____

Date _____

Prime Factorization

VOCABULARY:

Prime Factorization:

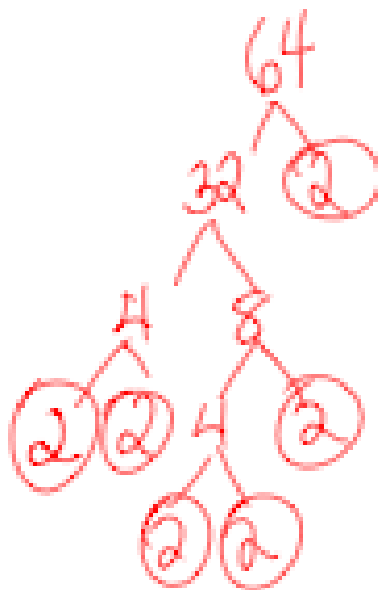
Prime factorization is writing a number as the product of its prime factors.

Examples:

multiply

Find the prime factorization of the value below.

64



STEPS:

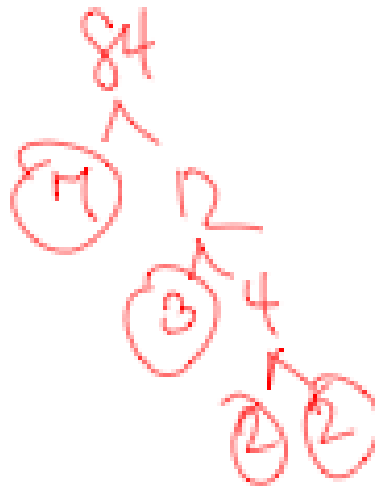
★ 1 is not used in the factor tree ★

1. Create a factor tree by thinking of two numbers greater than 1 that multiply together to give you the original value. These two numbers or factors form your first two branches.
2. Continue step #1 with the next factor that is not a prime and break it up into two of its factors.
3. Continue the process until only prime numbers are left.
4. Circle the prime numbers on the branches. Using these circled prime values, write the original value as the product of its prime factors.

The prime factorization of 64 is $2 \times 2 \times 2 \times 2 \times 2 \times 2$.

[Type text]

You Try: Find the prime factorization of 84.



The prime factorization of 84 is $2 \times 2 \times 3 \times 7$.