

Activity 1 Assessment

Investigating Prime Factorization

Prime Factorization and Powers

Represents a number as a product of factors in different ways.

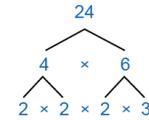
24

"I can think of 24 as 2×12 , 4×6 ,
or as $2 \times 2 \times 6$."

Identifies prime and composite numbers.

"24 is a composite number because it has
more than 2 factors.
23 is a prime number because it has
only 2 factors, 1 and itself."

Determines the prime factorization of a number.



" $24 = 2 \times 2 \times 2 \times 3$ "

Observations/Documentation

Activity 1 Assessment

Investigating Prime Factorization

Prime Factorization and Powers (cont'd)

Writes repeated multiplication of identical factors as a power and vice versa.

$$2 \times 2 \times 2 = 2^3$$

$$3^4 = 3 \times 3 \times 3 \times 3$$

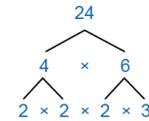
"In the power 2^3 , 2 is the base and 3 is the exponent."

Rewrites prime factorization of a number using powers.

$$24 = 2 \times 2 \times 2 \times 3$$

"I can rewrite the prime factorization using powers: $24 = 2^3 \times 3$."

Flexibly uses prime factorization to identify common factors and divisibility.



"24 is divisible by 2, 3, 4, 6, $2 \times 2 \times 2$ or 8, and $2 \times 2 \times 3$ or 12."

Observations/Documentation