

# 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  $2 \times 12$ ,  $4 \times 6$ ,  
or as  $2 \times 2 \times 6$ ."

(« Je peux penser à 24 comme  $2 \times 12$ ,  $4 \times 6$ , ou  
comme  $2 \times 2 \times 6$ . »)

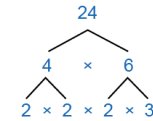
Identifies prime and composite numbers.

"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."

(« 24 est un nombre composé car il a plus de 2  
facteurs. 23 est un nombre premier car il a  
seulement 2 facteurs, 1 et lui-même. »)

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."

(« Dans la puissance  $2^3$ , 2 est la base et 3 est l'exposant. »)

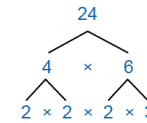
Rewrites prime factorization of a number using powers.

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

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

(« Je peux réécrire la factorisation première en utilisant les puissances :  $24 = 2^3 \times 3$ . »)

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."

(« 24 est divisible par 2, 3, 4, 6,  $2 \times 2 \times 2$  ou 8 et  $2 \times 2 \times 3$  ou 12. »)

### Observations/Documentation