

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

1. What are the factors of 23?

2. What are the factors of 25?

I. Prime and Composite Numbers

Prime Number: A number that has exactly two factors.

Examples of Prime Numbers

Composite Number: A number that has three or more factors.

Examples of Composite Numbers

The Prime Numbers from 1 to 100

3. Circle the prime numbers:

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25

4. Determine if each number is prime or composite:

43: prime or composite

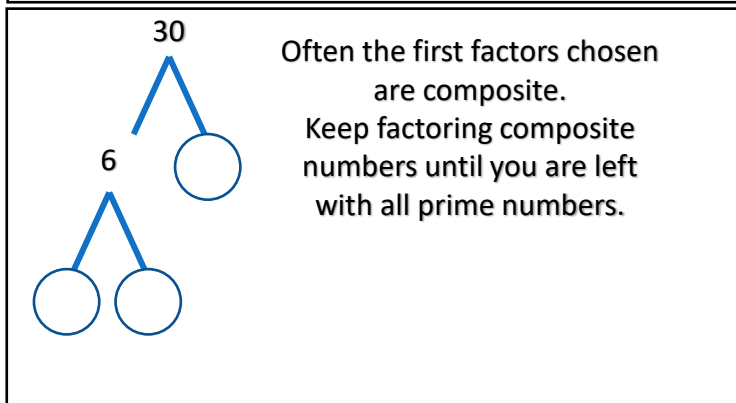
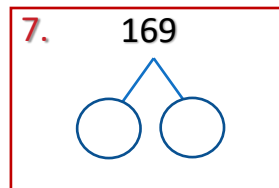
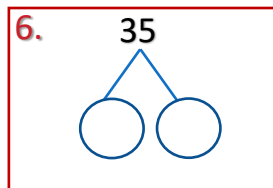
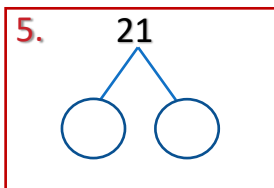
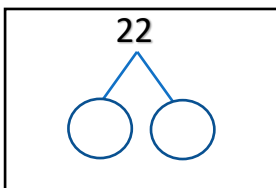
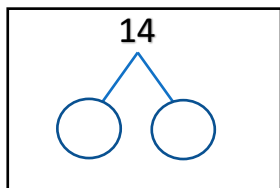
11: prime or composite

34: prime or composite

II. Prime Factorization – Using Factor Trees

Prime Factorization: Writing a number as the _____ of prime numbers.

Use the factor tree to factor each number into a product of prime numbers.



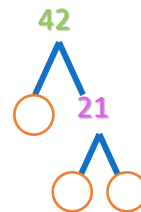
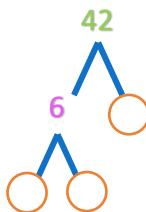
Prime Factorization (Tree Method):

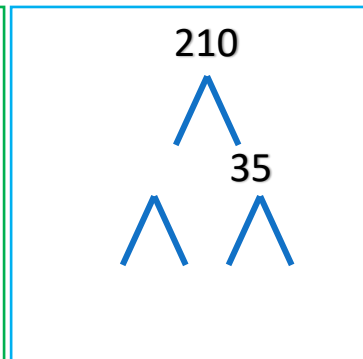
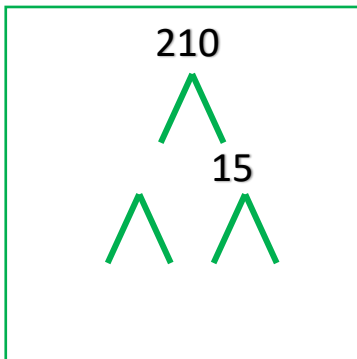
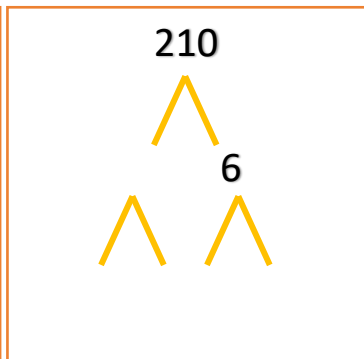
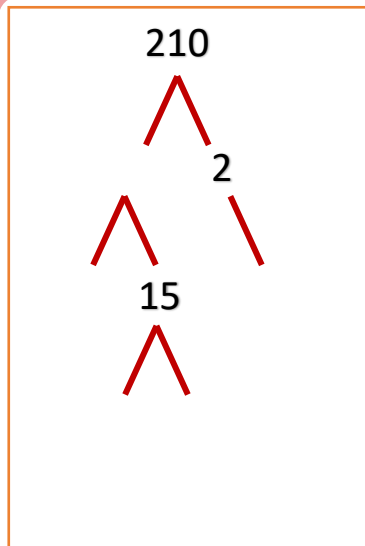
1. Choose any two factors of the number

2. Circle prime numbers

3. Continue factoring composite numbers

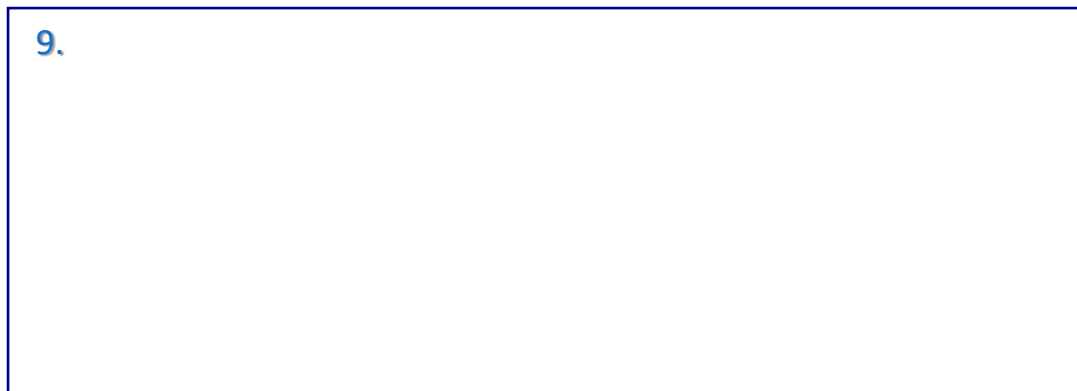
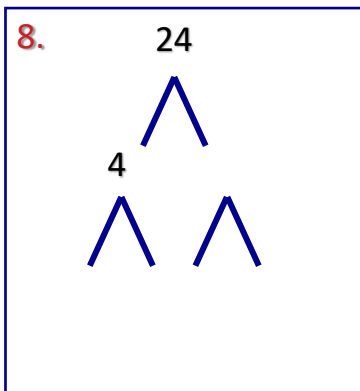
4. When all the numbers are prime, write the factors as a product of exponents.





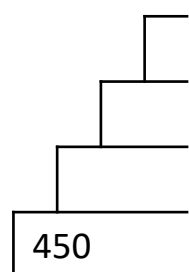
The prime factorization of 210 is _____

The prime factorization of a number will end with the same prime numbers. To check the answer, choose different starting factors.



III. Prime Factorization – Using prime factor division

Prime Factorization (Division Method):



If it is an even number, divide by 2

If it ends in 0 or 5, divide by 5

If the sum of the digits are a multiple of 3, divide by 3

Wait until the end to determine if it is divisible by 7, 11, 13, and the larger prime numbers.

Use Divisibility Tests

Divide only by Prime Numbers

Find the prime factorization of 24 using the division method.

