

Prime Factorization (5-1)

prime number	Decode pr·ime num·ber
Definition its only factors are 1 and itself	Example ⑪ 1 11 ⑫ 1 2
1 1 is neither composite	prime nor

composite number	Decode com·po·site num·ber
Definition has many (or multiple) factors	Example 15 1 3 5 15

Example 3: Prime or composite?

I Do	We Do	You Do
35	13	72
1 5 7 35	1 13	1 2 8 9 3 6 7 2
composite	prime	composite

Example 2: Determine if each number is divisible by 2, 3, 5, 6, 9, 10.

I Do	We Do	You Do
432	783	625
$4+3+2=9$	$7+8+3=18$	$6+2+5=13$
2, 3, 6, 9	3, 9	5

Example 1: List the **factors** of each number.

I Do	We Do	You Do
12	32	55
1 2 3 4 6 12	1 2 4 8 16 32	1 5 11 55
	<i>factor tree</i>	

Example 4: Write the **prime factorization** of each number.

I Do	We Do	You Do
160	42	68
<p style="text-align: center;">$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 5$</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">$2^5 \cdot 5$</div>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">$2 \cdot 3 \cdot 7$</div>	<p style="text-align: center;">$2 \cdot 2 \cdot 17$</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">$2^2 \cdot 17$</div>