Notes and Examples

Name:_

Finding <u>ALL</u> Factors of a number Finding Prime Factors of a number Math 6 Period _____

Finding Factors

numbers that 'Fit Into' another number

To find the *factors* of a target number:

1. Write the number 1 and your target number on a piece of paper with space in between.

2. Check each number for divisibility starting with the number 2

- stop when there are no more numbers to check or
- stop when you are half way to your number

Example: Find all factors of 12.

12: 1, ,12

There are ______ factors of 12. This number is prime / composite 2 factors / more than 2 factors

Notes and Example	S Name:	
Finding <u>ALL</u> Factors of a numbe Finding Prime Factors of a numb	r Per	Math 6 Period
Example: Find all factors of	18.	
18: 1,		,18
There are factors of	18. This number is	prime / composite 2 factors more than 2 factors
Example: Find all factors of	24.	
24: 1,		,24
There are factors of	24. This number is	prime / composite 2 factors more than 2 factors
Example: Find all factors of	17	

Example: Find all factors of 17.

17: 1,

There are ______ factors of 17. This number is prime / composite ______ factors ______ more than 2 factors

,17

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Sometimes we want to find the secret 'factor prints' of a composite number. This is called **<u>Prime Factorization</u>**. These are the prime factor's of a number.

Examples:	:		
6 = 2	X	3	and are both prime numbers
15 =	X		and are both prime numbers
21 =	X		and are both prime numbers

Tricky: Some composite numbers need more than 2 prime numbers to multiply together.

Try 12 = ____ x ____x

_____, ____ and _____ are ALL prime numbers

and _____ x _____= 12

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We can use a factor tree to find the prime factors of a target number and write it as a multiplication problem.

15

24

40

18