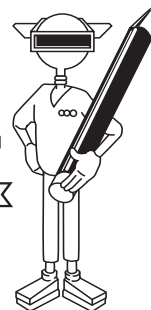




COURSE: **MSC III**
 MODULE 1: **Numbers and Number Sense**
 UNIT 1: **Numbers as Factors**

Student Logbook



Prime and Composite Numbers

As you work through the tutorial, complete the following.

1. What is your mission for this lesson? _____

2. The Multiplication Property of 1 states that _____ times any number equals that number.
3. The number 1 has _____ and _____ as a factor pair.
 Therefore, 1 has only _____ factor.
4. The number 4 has _____ factors and two pairs of factors:
 _____ $\times$ _____ and _____ $\times$ _____.
5. All whole numbers greater than 1 have at least _____ different factors.
6. A prime number is a number that has exactly _____ different factors, _____ and _____.
7. What are the prime numbers between 1 and 12?
 _____, _____, _____, _____, and _____.
8. Draw a circle around each number that has 2 as a factor. Draw a square around each number that has 3 as a factor. Draw a triangle around each prime number.

Key Words:

Prime number
 Composite number
 Divisible
 Factor
 Factor pairs
 Factor tree

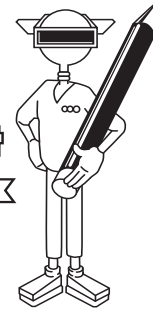
Learning Objectives:

- Identify the prime numbers less than 50.
- Determine the prime factors in a number.

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	26	27	28	29	30



Student Logbook



9. List the numbers from 1 to 30 that have both 2 and 3 as factors.

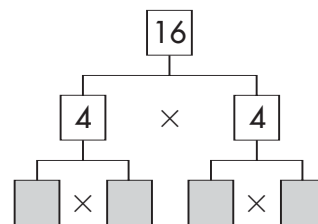
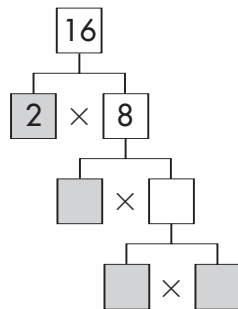
10. What are the prime numbers between 30 and 50? _____

11. A _____ number is a counting number greater than 1 that is not prime.

12. The number 1 is neither _____ nor _____.
It is the only counting number with just _____ factor.

13. Every composite number is the product of two or more
_____ .

14. Complete these factor trees to show the prime factors of 16.



15. Rewrite 100 as a product of its prime factors. _____

16. True or False: By looking at the factors of a number, you can tell whether it is a prime or a composite number. _____



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Prime and Composite Numbers

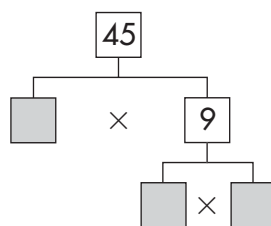
Your
Turn



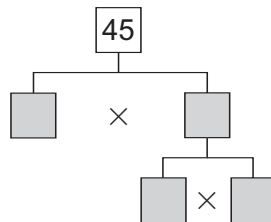
1. List all the factor pairs for each of the numbers in the table. Then give the number of different factors for each number, and tell if the number is prime (P) or composite (C).

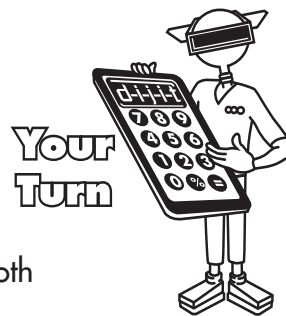
	Factor Pairs	Number of Factors	Prime or Composite
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

2. Complete the factor tree.



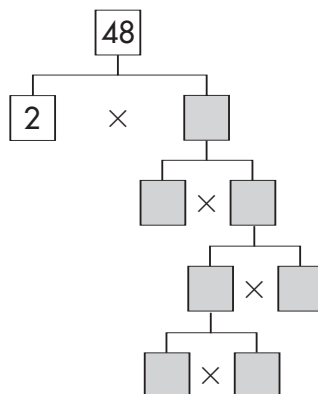
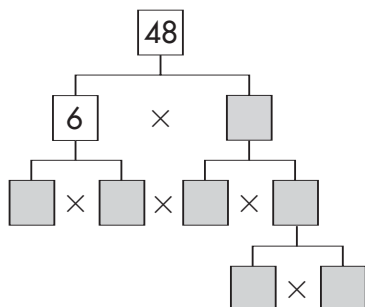
3. Start with a factor pair other than 5 and 9 and make a different factor tree for 45.





4. Why is the set of prime factors of the number 45 the same in both factor trees?

5. a. Complete these two factor trees for 48.



- b. Write 48 as the product of its prime factors. _____

6. List the factors of 36. Then sort the factors into prime and composite numbers.

Factors of 36: _____

Prime Factors	Composite Factors