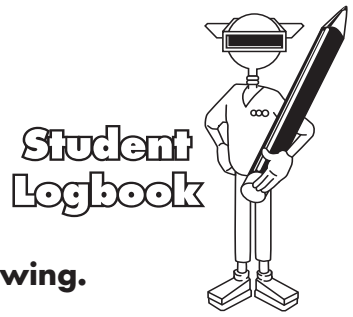
Name _____ Date _____

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



Identifying Common Factors

As you work through the tutorial, complete the following.

1. What is your mission for this lesson? _____
_____

2. Is 12 a prime factor of 24? _____ Why or why not? _____
_____
_____

3. _____ _____ is a way to write a number as the product of its prime factors.

4. The prime factorization of 24 is _____ × _____ × _____ × _____ .

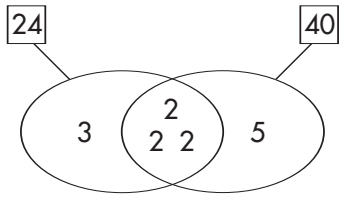
5. A _____ diagram is a way to display objects that have certain properties in common.

6. The prime factorization of 40 is _____ × _____ × _____ × _____ .

7. The greatest factor that 24 and 40 have in common is _____ .

8. What do you know about the numbers that appear in the overlapping region of a Venn diagram?
_____
_____

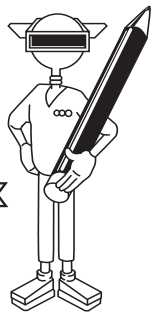
9. In this Venn diagram, the overlapping region shows the factors common to _____ and _____ .



Key Words:
Prime number
Composite number
Venn diagram
Common factor
Greatest Common Factor

Learning Objectives:
- Find the common factors of two whole numbers.
- Use factor trees and a Venn diagram to identify the Greatest Common Factor of two 2-digit numbers.
- Find the Greatest Common Factor of two 3-digit numbers.

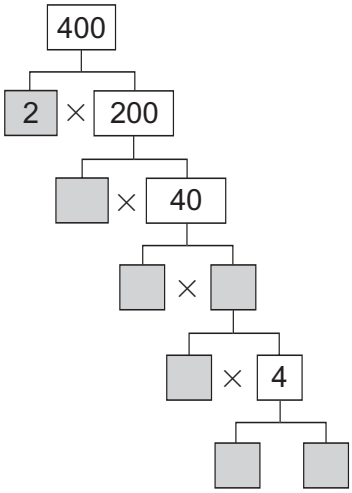
Name _____ Date _____

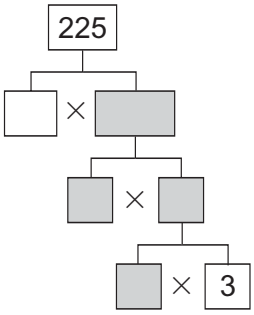


10. The GCF, or _____ _____ _____, is the greatest factor that two or more numbers have in common.

11. The GCF of 24 and 40 is _____ × _____ × _____ , or _____ .

12. **a.** Complete these factor trees to find the prime factors of 400 and 225.

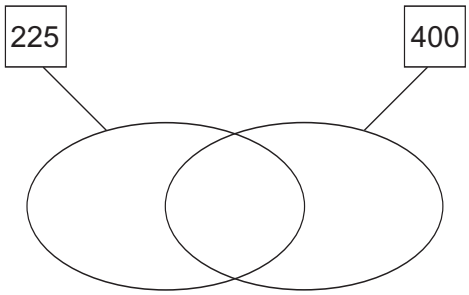




b. Write the prime factorization of each number.

400 =_____ 225 =_____

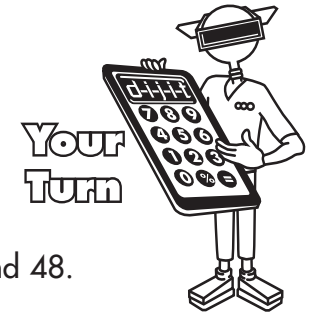
13. Draw a Venn diagram showing the prime factors of 225 and 400.



14. The GCF of 400 and 225 is _____ .

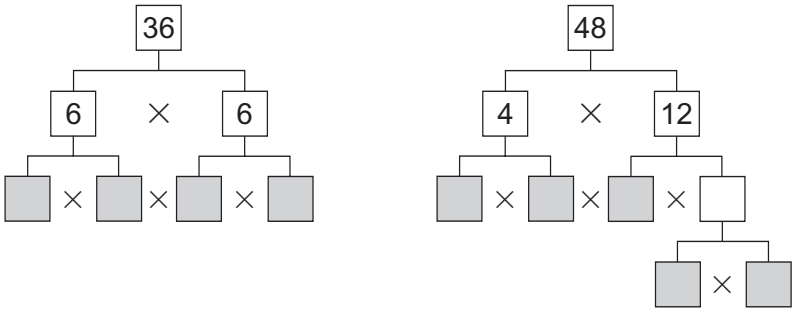
Name _____ Date _____

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



Identifying Common Factors

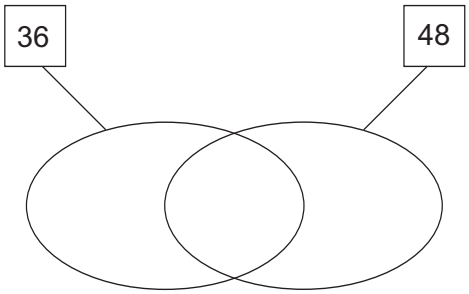
1. Use these factor trees to find the prime factorizations of 36 and 48.



Prime factorization of 36: _____

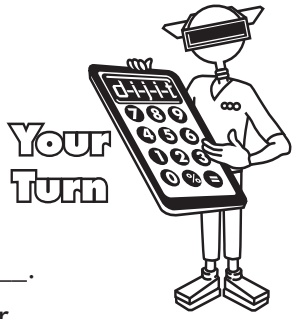
Prime factorization of 48: _____

2. Use this Venn diagram to show the prime factors of 36 and 48.



3. The Greatest Common Factor of 36 and 48 is _____ .
Explain how you found your answer. _____
_____
_____

Name _____ Date _____



4. What is the Greatest Common Factor of 54 and 72? _____.
Draw a Venn diagram or two factor trees to explain your answer.

5. Use the space below and create factor trees to find the prime factorization of 220 and 620.

220 620

6. What prime factors are common to 220 and 620? _____

7. What is the GCF of 220 and 660? _____ Explain: _____

_____

8. **a.** The GCF of two numbers is not always a prime number. Give an example of two numbers whose GCF is prime. _____ , _____, and two numbers whose GCF is not prime. _____ , _____. ____

b. Give an example of two 2-digit composite numbers that have no common factor. _____ and _____