Name: ____ Block: _____________

- CCSS: 6.NS.4
- Learning Objective: Prime Factorization and Greatest Common Factor

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- Academic Vocabulary:
  - Composite
  - Prime
  - Greatest Common Factor

- Examples:

Find the greatest common factor of 24, 30, and 36.

1. Factor Tree for 24 24 / \\ 4 6 / \\ / \\ 2 2 2 3 Prime Factors for 24 are 2•2•2•3.	2. Factor Tree for 30 30 / \\ 2 15 / / \\ 2 3 5 Prime Factors for 30 are 2•3•5.
3. Factor Tree for 36 36 / \\ 6 6 / \\ / \\ 2 3 2 3 Prime Factors for 36 are 2•2•3•3.	4. GCF of 24, 30, and 36. 2•2•2•3 2•3•5 2•2•3•3 Greatest Common Factor = 2•3 = 6

Practice:

1. Factor Tree for 16	2. Factor Tree for 28
3. Factor Tree for 32	4. GCF of 16, 28, and 32.

➢ Practice Continued:

Grace is making 48 sugar cookies and Connor had 32 apples for the party that they were throwing for Mr. Wong's birthday. If each treat bag will have the identical number of items in each bag with no left overs, what is the greatest number of treat bags they can make and how many cookies and apples will be in each treat bag?

Use factor trees to solve the problem.

Justification:

What are the differences between an composite number and a prime number?

Describe how you used factor Trees to find the greatest common Factor.