NAME_____

Module 4 **Fractions, Decimals, Percents, and Factors**
Lesson 3 **Factors and Prime Factorization**

Guided Practice 4.3

Set 1

1. Find the factors of 36.
1, 2, 3, 4, 6, 9, 12, 18, 36

2. Determine whether each number is prime or composite.

19	325	21
prime	**composite**	**composite**

Set 2

1. Find the prime factorization of 42.

42
**/ **
6 × 7
**/ \ **
2 × 3 × 7

2 × 3 × 7

2. Find the prime factorization of 96.

	96
2	48
2	24
2	12
2	6
2	3

2 × 2 × 2 × 2 × 2 × 3 or $2^5 \times 3$

3. Find the prime factorization of 125.

125
**/ **
5 x 25
**/ / **
5 x 5 x 5

5 × 5 × 5 or 5^3

Set 3

1. Find the common factors of 30 and 72.

30: 1, 2, 3, 5, 6, 10, 15, 30
72: 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72

Common factors: 1, 2, 3, 6

2. Find the greatest common factor of 30 and 72.

30: 1, 2, 3, 5, 6, 10, 15, 30
72: 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36,72

Greatest Common Factor: 6

3. Find the greatest common factor of 90 and 135.

90: 1, 2, 3, 5, 6, 9, 10, 15, 18, 30, 45, 90
135: 1, 3, 5, 9, 15, 27, 45, 135

Greatest Common Factor: 45

Set 4

1. Use prime factorization to find the GCF of 60 and 72.

$60 = \boxed{2} \times \boxed{2} \times \boxed{3} \times 5$
$72 = \boxed{2} \times \boxed{2} \times 2 \times \boxed{3} \times 3$

GCF: 2 × 2 × 3 = 12

2. Use prime factorization to find the GCF of 30, 45, and 120.

$30 = 2 \times \boxed{3} \times \boxed{5}$
$45 = \boxed{3} \times 3 \times \boxed{5}$
$120 = 2 \times 2 \times 2 \times \boxed{3} \times \boxed{5}$

GCF: 3 × 5 = 15