Name _____ Date _____ Class _____

SKILL 2: Primes and Composites

Every whole number greater than 1 is either a **prime number** or a **composite number**. A prime number has exactly two factors: itself and 1. A composite number has more than two factors. The numbers 0 and 1 are neither prime nor composite.

Example 1

Is 48 a prime number or a composite number?

The factors of 48 are 1, 2, 3, 4, 6, 8, 12, 16, 24, and 48.

Since there are more than two factors of 48, it is a composite number.

Example 2

Is 57 prime or composite?

Use divisibility rules to decide whether 57 has factors other than 1 and 57.

Is 57 divisible by 2? No; it does not end in 0, 2, 4, 6, or 8.

Is 57 divisible by 3? Yes; $5 + 7 = 12$, and 12 is divisible by 3.

57 is composite.

Guided Practice

Tell whether the given number is prime or composite. The factors that follow the number should help you decide.

1. 25: 1, 5, 25

_____

2. 83: 1, 83

_____

3. 54: 1, 2, 3, 6, 9, 18, 27, 54

_____

4. 68: 1, 2, 4, 17, 34, 68

_____

5. Use divisibility rules to help you determine whether 89 is prime or composite.

a. Is 89 divisible by 2? _____

b. Is 89 divisible by 3? _____

c. Is 89 divisible by 5? _____

d. Is 89 divisible by 7? _____

e. *Is 89 divisible by 8?* _____

f. *Is 89 divisible by 9?* _____

g. Is 89 prime or composite? _____

6. List the prime numbers less than 20. _____

7. List the composite numbers less than 20. _____