Name: Date:

WORKSHEET :

Prime(Composite) Numbers

Identify if the following numbers are prime or composite: (Prime, Composite, Neither)

1.	2 =	3 =	4 =
2.	5 =	7 =	11 =
3.	13 =	15 =	17 =
4.	19 =	21 =	23 =
5.	27 =	29 =	31 =
6.	33 =	37 =	39 =
7.	1,873 =	97 =	997 =
8.	257 =	339 =	409 =
9.	0 =	1 =	-10 =
10.	1.5 =	6/3 =	5/3 =

ANSWERS :

Prime(Composite) Numbers

Identify if the following numbers are prime or composite: (Prime, Composite, Neither)

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2.	5 = Prime	7 = Prime	11 = Prime
3.	13 = Prime	15 = Composite	17 = Prime
4.	19 = Prime	21 = Composite	23 = Prime
5.	27 = Composite	29 = Prime	31 = Prime
6.	33 = Composite	37 = Prime	39 = Composite
7.	1,873 = Prime	97 = Prime	997 = Prime
8.	257 = Prime	339 = Composite	409 = Prime
9.	0 = Neither	1 = Neither	-10 = Neither
10.	1.5 = Neither	6/3 = Prime	5/3 = Neither

KEY CONCEPTS:

A prime number is divisible by only 1 and itself. A composite number is divisible by more than 1 and itself. Learn to recognize the prime numbers up to 50.

1. Prime numbers are positive integers only greater than 1 by definition.

a. no negative primes

b. no fractions or decimals...only includes positive integers greater than 1

c. **1 is <u>not</u> a prime number** by definition even though it is seemingly divisible by only 1 and itself. Why? In short, because 1 is a unit in the identity principle and inclusion as a prime would cause a need for exceptions in several theorems so it is defined as not prime. e.g. Euclid's theorem that any integer is a product of its primes (the source of prime factorizations in later lessons)

2. Composite numbers are divisible by more than 1 and itself.

a. Any even number other than 2 is composite.

3. 0 and 1 are by definition neither prime nor composite (and the same could be said of negative numbers or fractions)

4. 2 is the smallest prime number and the only even prime number.