

Prime And Composite

1. Examine the numbers listed below. Identify the only number that might be prime. Explain how you know that the other numbers are composite.

163 is a prime number.

23,452 is composite because it ends in an even number.

1,000,000 is composite because it ends in an even number.

123,123,123 is composite because the sum of the digits add up to 18 which is divisible by 3 and 9 therefore the whole number is divisible by 3 and 9, making it a composite number.

2175 is composite because it ends in 5.

2. Identify each number as prime or composite. If the number is composite, list all of its factors.

a) 17 Prime b) 25 Composite 1, 5, 25 c) 47 Prime

d) 48 Composite 1, 2, 3, 4, 6, 8, 12, 16, 24, 48 e) 17 Prime

f) 99 Composite 1, 3, 9, 11, 33, 99

3. Which numbers between 30 and 40 are prime? 31, 37,

4. Show that there are no prime numbers from 200 to 210.

200 is divisible by 2, 201 is divisible by 3, 202 is divisible by

2, 203 is divisible by 7, 204 is divisible by 2, 205 is divisible by

5, 206 is divisible by 2, 207 is divisible by 9, 208 is divisible by

11, 210 is divisible by 10.

5. How do you know that the product of any two numbers greater than 1 must be a composite number?

Because you will end up with a product, divisible by the 2 numbers you divided with 100% of the time.