

DIVISIBILITY RULES:

1. If the last digit is even, the number is divisible by _____.
2. If the sum of the digits is divisible by 3, the number is divisible by _____.
3. If the last two digits form a number divisible by 4, the number is divisible by _____.
4. If the last digit is a 5 or a 0, the number is divisible by _____.
5. If the number is divisible by **both** 2 and 3, then the number is divisible by _____.
6. If the last 3 digits form a number divisible by 8, then the number is divisible by _____.
7. If the sum of the digits is divisible by 9, then the number is divisible by _____.
8. If the number ends in 0, it is divisible by _____.
9. If the number is divisible by **both** 3 and 4, it is also divisible by _____.

x is divisible by y if the remainder is _____ when x is divided by y . Dividing by _____ is undefined (not allowed). In a division problem, the number being divided is called the _____, the number doing the dividing is called the _____ and the answer is called the _____.

ODD AND EVEN NUMBERS:

All even numbers are divisible by _____. Examples of even numbers: _____.

An odd number is _____ divisible by 2. Examples of odd numbers: _____.

Consecutive ~~numbers~~ ^{integers} _____.

Ex. List 4 consecutive integers beginning with 7 _____.

Ex. List 3 consecutive even integers beginning with 8 _____.

Ex. List 5 consecutive odd integers beginning with 5 _____.

Are the following odd or even?

a) even + even = _____

b) (even)(even) = _____

c) odd + odd = _____

d) (odd)(odd) = _____

e) odd + even = _____

f) (even)(odd) = _____

g) The number 0 _____

PRIME AND COMPOSITE NUMBERS

A **prime number** is a positive integer that has exactly two **different** factors, itself and 1.

List the first 8 prime numbers: _____

The only even number that is prime is _____.

A **composite number** is a number that has more than two different factors.

Examples of composite numbers: _____

The number _____ is neither prime nor composite.

PRIME FACTORIZATION

The prime factorization of a number breaks down the number into a product of prime numbers. Factor the following into a product of primes.

a) 18

b) 250

c) 60

d) 80

SQUARES

When a positive number greater than 1 is squared, the result is (smaller, larger) than the original number.

When a positive number with a value between 0 and 1 is squared, the result is (smaller, larger) than the original number.

Ex. $8^2 =$ _____

Ex. $\left(\frac{1}{8}\right)^2 =$ _____

8 is _____ than _____

$\left(\frac{1}{8}\right)$ is _____ than _____