

# **Adding and Subtracting Real Numbers Video Lecture**

## **Sections 1.5 and 1.6**

### **Course Learning Objectives:**

- 1) Simplify numerical expressions.**
- 2) Translate words into algebraic expressions.**

### **Weekly Learning Objectives:**

- 1) Add and subtract real numbers.**
- 2) Evaluate algebraic expressions using real numbers.**
- 3) Translate sentences into mathematical expressions and simplify them.**

# Adding and Subtracting Real Numbers

## How to add signed numbers:

Like signs: Add the absolute values of the numbers. The sum has the same sign as the given numbers.

Unlike signs: Find the difference between the larger absolute value and the smaller. The sum has the sign of the number with the larger absolute value.

$$-12 + (-16) =$$

$$4 + (-8) =$$

$$7 + [3 + (-11)] =$$

$$\frac{9}{10} + \left(-\frac{3}{5}\right) =$$

$$[-5 + (-4)] + [9 + (-2)] =$$

Write a numerical expression for each phrase and simplify the expression.

The sum of -3 and 5 and -12.

10 more than the sum of -4 and -5.

### Definition of Subtraction:

### How to subtract real numbers:

1. Change subtraction to addition
2. Change the sign of the number being subtracted
3. Add, using rules for addition

$$8 - 13 =$$

$$-12 - 5 =$$

$$13 - (-3) =$$

$$\frac{3}{4} - \left(-\frac{1}{2}\right) =$$

$$-8 + [(-3 - 10) - (-4 + 1)] =$$

**Write and simplify a numerical expression for the phrase:**

**19 less than the difference between 9 and -2.**