Chapter 1 Section 2
ADDITION AND SUBTRACTION OF WHOLE NUMBERS

Addition and Subtraction of Whole Numbers

Addition

5	+	**2**	=	**7**
Addend		**Addend**		**Sum**

	Hundreds	**Tens**	**Ones**
	1	1	
	3	**5**	**9**
+	**4**	**7**	**8**
	8	**3**	**7**

→ **Add the Ones' Column**

9 + 8 = 17 (1 Ten + 7 Ones)

Write the **7** in the ones' Column and carry the **1** ten to the tens' column

→ **Add the Tens' Column**

1 + 5 + 7 = 13 (1 hundred + 3 tens)

Write the **3** in the tens' column and carry the **1** hundred to the hundred to the hundreds' column

→ **Add the Hundreds' Column**

1 + 3 + 4 = 8 (8 hundreds)

Write the **8** in the hundreds' column

Evaluate a + b when a = 678 and b = 294

→ Replace **a** with **678** and **b** with **294** **a + b = 678 + 294**

→ Arrange the numbers vertically 678

\+ 294

→ Add **972**

- **The Addition Property of Zero**

  5 + 0 = 5 **or** 0 + 5 = 5 **a + 0 = a** **or** **0 + a = a**

- **Commutative Property of Addition**

  5 + 7 = 7 + 5 **a + b = b + a**

  12 = 12

- **Associative Property of Addition**

  (2 + 3) + 4 = 2 + (3 + 4) **(a + b) + c = a + (b + c)**

  5 + 4 = 2 + 7

  9 = 9

Subtraction

8	**-**	**5**	**=**	**3**
Minuend	**-**	**Subtrahend**	**=**	**Difference**

	Hundreds	**Tens**	**Ones**
	3	$_{1}$**5**	**9**
-	$_{1}$**2**	**7**	**8**
	0	**8**	**1**

→ **Subtract the Ones' Column**

8 + ? = 9 (We need to add **1** to 8 to get 9)

Write the **1** in the ones' Column

→ **Subtract the Tens' Column**

7 + ? = 5 (**5** is smaller than 7, so we will borrow 1 hundred, convert it to ten tens and add it to the 5 there to get **15**, which is now larger than 7)

Then we will add a 1 in front of the 2 (in the hundreds' column)

Like the example above

7 + ? = 15 (We need to add **8** to get 15)

Write the **8** in the tens' column

→ **Add the Hundreds' Column**

3 + ? = 3 (We need to add 0 to get 3)

(1+2=3)

Write the **0** in the hundreds' column

Phrases that indicate subtraction:

10 minus 3	10 – 3
8 less 4	8 – 4
2 less than 9	9 – 2
The difference between 6 and 1	6 – 1
7 decreased by 5	7 – 5