

1.5 Addition of Real Numbers

In the previous section, we saw a few properties of real numbers; namely, the associative, commutative, and distributive properties. This section will introduce another two important properties.

- Identity Property

- $a + 0 = a$

- $0 + a = a$

- Inverse Property

- $a + (-a) = 0$

- $-a + a = 0$

Example 1.5.1. Simplify fully:

$$4 + 0$$

Example 1.5.2. Simplify fully:

$$6 + (-6)$$

Example 1.5.3. Simplify fully:

$$0 + (5a + b)$$

Example 1.5.4. Simplify fully:

$$[-(2y + 1)] + (2y + 1)$$

Example 1.5.5. Simplify and evaluate:

$$|-3 + (-5)| + |2 + (-6)|$$

Example 1.5.6. Simplify and evaluate:

$$-25 + [-|18 + (-26)|]$$