1.6 Subtraction of Real Numbers

Subtraction can be thought of as adding a negative number. In fact, we define subtraction as:

$$a - b = a + (-b)$$

We can use this definition to rewrite expressions as sums (addition).

Example 1.6.1. Rewrite as a sum:

$$2xy - 13y - 6x$$

However, we typically use this property to go the other direction instead. When we have multiple signs, we rewrite them as one sign. If we have $++$ or $--$, we replace with a single $+$. If we have opposite signs - $+-$ or $-+$, we replace with a single $-$.

Example 1.6.2. Evaluate:

$$-6 - (-3) + (+8) + (-11)$$

Example 1.6.3. Evaluate and simplify fully:

$$15 - (-3x) + 8x - (-10)$$

Example 1.6.4. Evaluate:

$$|-9-(-3+7)|-|-17-(-2)|$$