**Subtracting Rational Numbers**

**Subtracting Positive Rational Numbers:**

Ex (1): The temperature on an outdoor thermometer on Monday was **5.5** °C. The temperature on Thursday was **7.25** degrees less than the temperature on Monday. What was the temperature on Thursday?

Step(1): Write the equation (Monday temp was 5.5 but Thursday temp 7.25 less)

 5.5 + (-7.25) or 5.5 – 7.25

Step(2): Solve the equation

 -7.25 or 5.5 – 7.25 = **-1.75**

 5.50 (using a calculator to get the answer)

  **-1.75** (manually)

Ex (2): Find the sum of 1/2 + (-1 2/3). Leave answer as a fraction.

$$\frac{1}{2} + \left(-1\frac{2}{3}\right)= \frac{1}{2} +\left(-\frac{5}{3}\right)= \frac{\left(1 x 3\right)}{2 x 3} +\frac{-5 x 2}{3 x 2}= \frac{3}{6} +\left(-\frac{10}{6}\right)=-\frac{7}{6}= -1\frac{1}{6}$$

Answer:$-\frac{7}{6} as a fraction or -1\frac{1}{6} as a mixed number$

**Subtracting Negative Rational Numbers:**

Ex (3): During the hottest week of the summer, the water level of the Muskrat River was **5/6** foot below normal. The following week, the level was **1/3** foot below normal. What is the overall change in the water level?

Step(1): Write the equation ( 5/6 ft below normal then 1/3 ft below normal again)

 $-\frac{1}{3} - \left(-\frac{5}{6}\right)$

Step (2): Solve the equation

$$-\frac{1}{3}-\left(-\frac{5}{6}\right) = \frac{-1 x 2}{3 x 2}-\left(-\frac{5}{6}\right) = -\frac{2}{6} +\frac{5}{6} = \frac{-2+5}{6} = \frac{3}{6} =\frac{1}{2} ft change$$