

## 2-5 Adding and Subtracting Rational Numbers

Recall:

\* Rules for adding signed numbers

§ When adding numbers with the same signs, **add** the absolute value of each number and take the **common** sign.

§ When adding numbers with different signs, **subtract** the smaller absolute value from the larger absolute value and take the sign of the **larger** absolute value.

\* To subtract, change to adding the opposite and follow the rules for adding signed numbers.

\* To add or subtract fractions, you must have a common denominator.

\* To add or subtract decimals, line up the decimals

Simplify. State your thought process (Add/Subtr.) Answers should be reduced fractions or mixed numbers. No decimal answers unless there are decimals in the problem.

1)  $13.21 + (-2.015)$

Different signs → **SUBTRACT** and take the **LARGER** sign.

To add or subtract decimals, line up the decimals

$$\begin{array}{r} 13.21 \\ - 2.015 \\ \hline \end{array}$$

Put zeros in as place holders

$$\begin{array}{r} 13.210 \\ - 2.015 \\ \hline \end{array}$$

Subtract

$$11.195$$

Final answer:  $11.195$  SUBTR

2)  $\frac{5}{16} - \frac{3}{8}$

Use the Subtr. Rule.

$$\frac{5}{16} + \left(\frac{-3}{8}\right)$$

Find the LCD

16

Rewrite fractions with LCD

$\frac{5}{16}$  has the LCD

$$\frac{-3 \cdot 2}{8 \cdot 2} = \frac{-6}{16}$$

Replace the fractions with new ones

$$\frac{5}{16} + \left(\frac{-6}{16}\right)$$

Different signs → **SUBTRACT** and take the **LARGER** sign.

$$\frac{-1}{16}$$

Final answer:  $\frac{-1}{16}$  SUBTR