Adding and subtracting with rational numbers

To add and subtract with rational numbers, use the same steps as with whole numbers, remembering the rules for addition and subtraction of negative numbers.

1. Add $-0.35 + (-2.5)$

$$\begin{array}{r} -0.35 \\ + \ -2.5 \\ \hline -2.85 \end{array}$$

First, line up the decimal points.

Apply the correct sign to each number.

Add, giving the answer a negative sign since both numbers are negative.

2. Subtract $-\frac{1}{2} - \frac{3}{4}$

$-\frac{1}{2} = -\frac{2}{4}$ and $\frac{3}{4} = \frac{3}{4}$ First, find a common denominator.

$-\frac{2}{4} - \frac{3}{4} = \frac{-2-3}{4}$ Subtract the numerators.

$= -\frac{5}{4} = -1\frac{1}{4}$ Simplify with the correct sign.

3. Add $2\frac{3}{4} + (-4\frac{1}{8})$

$2\frac{3}{4} = \frac{11}{4}$ and $-4\frac{1}{8} = -\frac{33}{8}$ First, change to improper fractions.

$\frac{11}{4} = \frac{22}{8}$ Find a common denominator.

$\frac{22}{8} + -\frac{33}{8} = \frac{22 + -33}{8}$ Add the numerators.

$= -\frac{11}{8} = -1\frac{3}{8}$ Simplify with the correct sign.

State whether each sum is **positive**, **negative**, or **zero**.

1. $-2.7 + 3.2$

2. $-\frac{1}{2} + \frac{3}{4}$

3. $-0.86 - (-4.5)$

4. $4\frac{1}{8} - 6\frac{1}{7}$

5. $\frac{3}{4} - \frac{4}{5}$

6. $-2\frac{2}{3} + 2\frac{4}{6}$

Find each sum or difference.

7. $-4.2 - 3.7$

8. $3\frac{1}{2} - (-5\frac{1}{4})$

9. $\frac{3}{8} - \frac{1}{2}$

10. $8.4 - 9.6$

11. $-0.68 + 1.29$

12. $-\frac{7}{8} + (-\frac{3}{4})$

13. $-7\frac{1}{2} - 3\frac{1}{4}$

14. $-9\frac{3}{4} + 3\frac{1}{4}$

15. Use the formula, $p = w + m$, to find the retail price (p) if the markup (m) on a CD is $3.59 and the wholesale price (w) is $12.97.