

I can add and subtract signed fractions.

- If given mixed numbers, change to improper fractions (easier when working with negatives).
- Find a common denominator.
- Add or subtract the numerators, following the rules for integers.
- Keep the denominators the same.

EXAMPLES:

$$A. -\frac{3}{4} + 1\frac{1}{2} \quad -\frac{3}{4} + \frac{3}{2} \rightarrow -\frac{3}{4} + \frac{6}{4} = \left(\frac{3}{4}\right)$$

$$B. 2\frac{5}{8} - \left(-\frac{2}{5}\right) \quad \frac{21}{8} + \frac{2}{5} \rightarrow \frac{105}{40} + \frac{16}{40} = \left(\frac{121}{40} \text{ or } 3\frac{1}{40}\right)$$

$$C. -3\frac{1}{2} - \frac{4}{7} \quad -\frac{7}{2} - \frac{4}{7} \rightarrow -\frac{49}{14} - \frac{8}{14} = \left(-\frac{57}{14} \text{ or } -4\frac{1}{14}\right)$$

$$D. \frac{2}{3} + \left(-\frac{9}{10}\right) \quad \frac{20}{30} + \frac{-27}{30} = \left(\frac{-7}{30}\right)$$

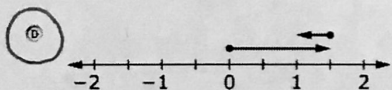
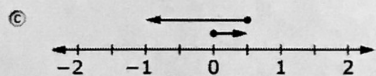
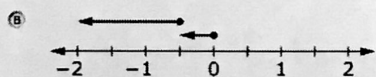
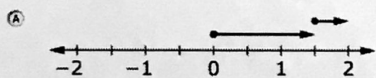
$$E. \frac{5}{6} - 3\frac{1}{12} \quad \frac{5}{6} - \frac{37}{12} \rightarrow \frac{10}{12} - \frac{37}{12} = \frac{-27}{12} = \left(\frac{-9}{4} \text{ or } -2\frac{1}{4}\right)$$

AIR/Test Practice

- 1) Enter the value of $\frac{3}{4} + \frac{7}{12} - (-4)$.

$$\frac{9}{12} + \frac{7}{12} + \frac{48}{12} = \frac{64}{12} = \frac{16}{3} = 5\frac{1}{3}$$

- 2) Which number line model represents the sum of $1\frac{1}{2} + (-\frac{1}{2})$?



- 3) Which expressions are equivalent to $3\frac{1}{4} - (-\frac{5}{8})$?

Select all that apply.

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

(B) $3\frac{1}{4} + (\frac{5}{8})$

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

(D) $3\frac{1}{4} + (+\frac{5}{8})$

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

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

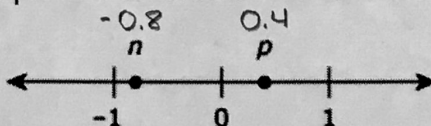
- 4) Kari has a total of $12\frac{3}{4}$ yards of string for her craft project. She uses $3\frac{1}{5}$ yards of string. She needs $4\frac{1}{4}$ yards of string to finish her project. Will she have enough string? If so, how much will she have left over? If not, how much string does she need?

$$12\frac{3}{4} - 3\frac{1}{5} \rightarrow \frac{51}{4} - \frac{16}{5} \rightarrow \frac{255}{20} - \frac{64}{20} = \frac{191}{20} - \frac{85}{20} = \frac{106}{20} = \frac{53}{10} =$$

$$4\frac{1}{4} = \frac{17}{4} = \frac{85}{20}$$

Yes, she has enough. $5\frac{3}{10}$ left over

- 5) Two numbers, n and p are plotted on the number line shown.



The numbers $n - p$, $n + p$, and $p - n$ will be plotted on the number line.

The number with the least value is $n - p$ ($n - p$, $n + p$, or $p - n$) and the

number with the greatest value is $p - n$ ($n - p$, $n + p$, or $p - n$).