

Warm-Up:

Adrian drives a tanker for the BPC. He leaves the refinery with his tanker $\frac{7}{8}$ full. If he delivers $\frac{1}{4}$ of the tanks capacity at the first stop and $\frac{1}{3}$ the tanks capacity at the second stop, find the amount of fuel that remains in the tanker.

$$\frac{7 \cdot 3}{8 \cdot 3} - \frac{1 \cdot 6}{4 \cdot 6} - \frac{1 \cdot 8}{3 \cdot 8}$$

$$\begin{aligned} 8: & 8, 16, \textcircled{24}, 32 \\ 4: & 4, 8, 12, 16, 20, \textcircled{24} \\ 3: & 3, 6, 9, 12, 18, 21, \textcircled{24} \end{aligned}$$

$$\text{LCM}(8, 4, 3) = 24$$

$$\begin{aligned} & \frac{21}{24} - \frac{6}{24} - \frac{8}{24} \\ & \underbrace{\hspace{10em}} \\ & \frac{15}{24} - \frac{8}{24} \end{aligned}$$

$\frac{7}{24}$ of the fuel remains

HW ? # 13

$$\frac{1 \cdot 9}{4 \cdot 9} + \frac{2 \cdot 4}{9 \cdot 4} + \frac{1 \cdot 12}{3 \cdot 12}$$

PF:

$$\begin{array}{ccc} 4 & 9 & 3 \\ 2 \swarrow 2 & 3 \swarrow 3 & 3 \\ & & 3 \end{array}$$

$$\frac{9}{36} + \frac{8}{36} + \frac{12}{36}$$

$$3 \cdot 2 \cdot 2 \cdot 3 = 36 \quad \text{LCM}$$

$$\frac{17}{29}$$

$$\boxed{\frac{29}{36}}$$

3.4 Add/Sub Mixed Numbers

Recall $3\frac{2}{5}$ means $3 + \frac{2}{5}$ $\frac{2}{5} = 0.4$
 2.5

Estimating whole # next look
 $3\frac{2}{5} \rightarrow 3$ $3 \rightarrow 4$ $\frac{1}{3}$ $\frac{2}{5}$ $\frac{3}{5}$ $\frac{4}{5}$ $\frac{5}{5}$
 \checkmark \checkmark \checkmark \checkmark \checkmark

Ex 1

a) $16\frac{1}{8} + 5\frac{5}{8}$

Estimate

$$16 + 6 = 22$$

Exact $(16 + 5) + (\frac{1}{8} + \frac{5}{8})$
 $21\frac{6}{8} = \boxed{21\frac{3}{4}}$

b) $8\frac{5}{8} - 3\frac{1}{12}$

Est. $9 - 3 = 6$

Ex. $(8 - 3) + (\frac{5}{8} - \frac{1}{12})$
 $8 - 3 + \frac{15}{24} - \frac{2}{24}$
 $\boxed{5\frac{13}{24}}$

Ex 2 Carrying

$$9\frac{5}{8} + 13\frac{7}{8}$$

Est. $10 + 14 = 24$

Ex. $9 + 13 + \frac{5}{8} + \frac{7}{8}$

$$22 + \frac{12}{8}$$

\downarrow $1\frac{4}{8} \rightarrow 1\frac{1}{2}$

$$22 + 1\frac{1}{2}$$

$$\boxed{23\frac{1}{2}}$$

If you have an improper fraction... you will carry

EX 3 Borrow

a) $7 - 2\frac{5}{6}$

Est. $7 - 3 = 4$

Ex. $(\overset{6}{\cancel{7}} - 2) + (\overset{6}{\cancel{6}} - \frac{5}{6})$
FILL

$$4\frac{1}{6}$$

b) $8\frac{1}{3} - 4\frac{3}{5}$

Est. $8 - 5 = 3$

Ex. $\overset{1}{\cancel{8}} - 4 + \frac{1}{3} - \frac{3}{5}$
LCM: 15
 $7 - 4 + \frac{5}{15} - \frac{9}{15}$
 $\frac{20}{15}$

$$3\frac{11}{15}$$

Ex 4 Add/Sub Mixed #'s

a) $2\frac{3}{8} + 3\frac{3}{4}$

$$\frac{19}{8} + \frac{15 \cdot 2}{4 \cdot 2}$$

LCM: 8

$$\frac{19}{8} + \frac{30}{8} = \frac{49}{8} = 6\frac{1}{8}$$

$$\begin{array}{r} 8 \overline{) 49} \\ \underline{-48} \\ 1 \end{array}$$