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1/25/24 Ch. 10 +1- Fractions + Mixed #s

$$\frac{4}{5} + \frac{4}{5} = \boxed{\frac{8}{5} = 1\frac{3}{5}}$$

$$5 \overline{) 8} \begin{array}{r} 1 \\ -5 \\ \hline 3 \end{array}$$

$$\frac{13}{3} + \frac{7}{3} = \boxed{\frac{20}{3} = 6\frac{2}{3}}$$

$$\begin{array}{r} \times 6 \\ 3 \overline{) 20} \\ -18 \\ \hline 2 \end{array}$$

$$\frac{3}{8} + \frac{7}{8} = \frac{10}{8} = 1\frac{2}{8} = 1\frac{1}{4}$$

$$\frac{2}{10} + \frac{8}{10} = \boxed{\frac{10}{10} = 1}$$

$$\frac{37}{3} + \frac{12}{3} = \boxed{\frac{49}{3} = 16\frac{1}{3}}$$

$$\begin{array}{r} 16 \\ 3 \overline{) 49} \\ -36 \\ \hline 13 \\ -12 \\ \hline 1 \end{array}$$

$$\begin{array}{r} 16\frac{1}{3} \\ 3 \overline{) 49} \\ -36 \\ \hline 13 \\ -12 \\ \hline 1 \end{array}$$

Tip: "a" = 1
 "an" = 1
 "the" = 1
 "one" = 1

$$\cancel{1} - \frac{1}{4} =$$

$$\rightarrow \frac{4}{4} - \frac{1}{4} = \boxed{\frac{3}{4}}$$

$$\cancel{1} - \frac{4}{5} =$$

$$\rightarrow \frac{5}{5} - \frac{4}{5} = \boxed{\frac{1}{5}}$$

$$3 - \frac{2}{3}$$

$$(2+x) - \frac{2}{3}$$

$$\cancel{2} \frac{3}{3} - \frac{2}{3} = \boxed{2 \frac{1}{3}}$$

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$$\cancel{5} - \frac{3}{\cancel{5}} =$$

$$4\frac{5}{5} - \frac{3}{5} = \boxed{4\frac{2}{5}}$$

$$\cancel{25} - \frac{25}{28} =$$

$$28\frac{28}{28} - \frac{25}{28} = \boxed{\frac{3}{28}}$$

$$\cancel{2} - \frac{3}{6} =$$

$$1\frac{6}{6} - \frac{3}{6} = \boxed{1\frac{3+3}{6 \div 3} = 1\frac{1}{2}}$$

$$\cancel{7} - \frac{5}{7} =$$

$$16\frac{7}{7} - \frac{5}{7} = \boxed{16\frac{2}{7}}$$

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Ch. 10 +/- Mixed #s

1/30/24

$$1\frac{1}{4} + 1\frac{1}{4} = \boxed{2\frac{2}{4} = 2\frac{1}{2}}$$

$$6\frac{2}{3} - 5\frac{1}{3} = \boxed{1\frac{1}{3}}$$

$$\begin{array}{r} 6\frac{9}{10} \\ + 3\frac{7}{10} \\ \hline 9\frac{16}{10} \\ 9 + \frac{16}{10} \end{array}$$

$10 \overline{) 16}$
 $\underline{-10}$
 6

$10\frac{6}{10}$ (circled)
 $\swarrow$

$$10\frac{6}{10} \div \frac{2}{2} = 10\frac{3}{5}$$

$$\begin{array}{r}
 5\frac{4}{8} \\
 + 2\frac{5}{8} \\
 \hline
 7\frac{9}{8}
 \end{array}$$

$8\frac{1}{8}$ (boxed)
 $8\overline{)9\frac{1}{8}}$
 $\underline{-8}$
 1

$7\frac{9}{8} \leftarrow 8\frac{1}{8}$

$$10\frac{3}{5} + 3\frac{2}{5} = 13\frac{5}{5} = 13 + 1 = \boxed{14}$$

$13 + \frac{5}{5} + 1$

$$14\frac{1}{8} + 2\frac{3}{8} = 16\frac{4}{8}$$

$16 + 1\frac{2}{8}$
 $8\overline{)10\frac{2}{8}}$
 $\underline{-8}$
 2

$\boxed{17\frac{2}{8} = 17\frac{1}{4}}$

Ch. 10 Regroup / Borrow to $\ominus$ mixed #s.

1/31/24

$$\begin{array}{r}
 \cancel{2} \frac{1}{4} - 1 \frac{3}{4} = \\
 (1 \frac{\cancel{4}}{4} + \frac{1}{4}) - 1 \frac{3}{4} \\
 1 \frac{5}{4} - 1 \frac{3}{4} = \boxed{\frac{2}{4} = \frac{1}{2}}
 \end{array}$$

$$\begin{array}{r}
 \star \cancel{2} \frac{1}{4} - 1 \frac{3}{4} = \\
 (1 \frac{5}{4} - 1 \frac{3}{4} = \boxed{\frac{2}{4}} \\
 \rightarrow \frac{9}{4} - \frac{7}{4} = \boxed{\frac{2}{4}}
 \end{array}$$

$$\cancel{6} \frac{1}{3} - 2 \frac{2}{3} =$$

$$\boxed{5 \frac{4}{3} - 2 \frac{2}{3} = 3 \frac{2}{3}}$$

$$\cancel{7} \frac{2}{9} - 3 \frac{7}{9} =$$

$$\boxed{6 \frac{11}{9} - 3 \frac{7}{9} = 3 \frac{4}{9}}$$

$$\cancel{32} \frac{3}{7} - 30 \frac{4}{7} =$$

$$\boxed{31 \frac{10}{7} - 30 \frac{4}{7} = 1 \frac{6}{7}}$$

$$\cancel{102} \frac{47}{90} - 23 \frac{51}{90} =$$

$$\boxed{100 \frac{137}{90} - 23 \frac{51}{90} = 78 \frac{86}{90} \div 2}$$

$$\boxed{78 \frac{43}{45}}$$

Ch. 10 Properties

1/25/23

Associative Property

(Change what is inside) !

In any $(+)$ / $(\times)$, any way you change what #s are in parentheses the answer will be the same.

$$(1\frac{1}{2} + 2\frac{1}{2}) + 3 = 1\frac{1}{2} + (2\frac{1}{2} + 3)$$

Commutative Property

Change # order

In $(+)$ / $(\times)$, any way you change the ORDER of #s, the answer will stay the same.

Assoc. + Comm.

$$(1\frac{1}{2} + 3) + 2\frac{1}{2} = (1\frac{1}{2} + 2\frac{1}{2}) + 3$$