

09.24.18

Add & Subtract:

$$\begin{array}{r} 3 \frac{5}{6} \\ + 1 \frac{3}{4} \\ \hline \end{array}$$

$$(3+1) + \left(\frac{5}{6} + \frac{3}{4} \right)$$

$$= 4 + \left(\frac{5}{6} \cdot \frac{2}{2} + \frac{3 \cdot 3}{4 \cdot 3} \right)$$

$$= 4 + \left(\frac{10}{12} + \frac{9}{12} \right)$$

$$= 4 + \frac{19}{12}$$

$$= 4 + 1 \frac{7}{12}$$

$$= \boxed{5 \frac{7}{12}}$$

$$\begin{array}{r} 1 \frac{7}{12} \\ \hline 12 \overline{) 19} \\ \underline{12} \\ 7 \end{array}$$

$$4 \frac{1}{10}$$

$$- 1 \frac{7}{15}$$

$$= (4 - 1) + \left(\frac{1}{10} - \frac{7}{15} \right)$$

$$= (3 - 1) + \left(1 + \frac{1}{10} - \frac{7}{15} \right)$$

$$= 2 + \left(\frac{11}{10} - \frac{7}{15} \right)$$

$$= 2 + \left(\frac{11}{10} \cdot \frac{3}{3} - \frac{7 \cdot 2}{15 \cdot 2} \right)$$

$$= 2 + \left(\frac{33}{30} - \frac{14}{30} \right)$$

$$= 2 + \frac{19}{30}$$

$$= \boxed{2 \frac{19}{30}}$$

Unit 2 Practice Assessments:

$$20. \quad \frac{4}{9} + \frac{7}{5} \left(\frac{5}{6} \right)$$

$$= \frac{4}{9} + \frac{7 \cdot \cancel{5}}{\cancel{5} \cdot 2 \cdot 3}$$

$$= \frac{4}{9} + \frac{7}{6}$$

$$= \frac{4}{9} \cdot \frac{2}{2} + \frac{7}{6} \cdot \frac{3}{3}$$

$$= \frac{8}{18} + \frac{21}{18}$$

$$= \frac{29}{18}$$

$$\# \frac{3}{8} + \frac{11}{7} \left(\frac{7}{6} \right)$$

$$= \frac{3}{8} + \frac{11}{6}$$

$$= \frac{3}{8} \cdot \frac{3}{3} + \frac{11}{6} \cdot \frac{4}{4}$$

$$= \frac{9}{24} + \frac{44}{24}$$

$$= \frac{9+44}{24}$$

$$= \frac{53}{24}$$

$$\# 22. \left(\frac{4}{9} + \frac{5}{6} \right) \cdot \left(\frac{9}{5} \right)$$

$$= \left(\frac{4}{9} \cdot \frac{2}{2} + \frac{5}{6} \cdot \frac{3}{3} \right) \left(\frac{9}{5} \right)$$

$$= \left(\frac{8}{18} + \frac{15}{18} \right) \left(\frac{9}{5} \right)$$

$$= \frac{23}{18} \cdot \frac{9}{5}$$

$$= \frac{23}{\cancel{2} \cdot \cancel{3} \cdot \cancel{3}} \cdot \frac{\cancel{3} \cdot \cancel{3}}{5}$$

$$= \frac{23}{10}$$

$$\begin{aligned}
23. & \left(\frac{3}{8} + \frac{7}{6}\right) \cdot \left(\frac{5}{9}\right) \\
& = \left(\frac{3}{8} \cdot \frac{3}{3} + \frac{7}{6} \cdot \frac{4}{4}\right) \left(\frac{5}{9}\right) \\
& = \left(\frac{9}{24} + \frac{28}{24}\right) \left(\frac{5}{9}\right) \\
& = \frac{37}{24} \cdot \frac{5}{9} \\
& = \frac{37}{2 \cdot 2 \cdot 3} \cdot \frac{5}{3 \cdot 3} \\
& = \frac{185}{216}
\end{aligned}$$

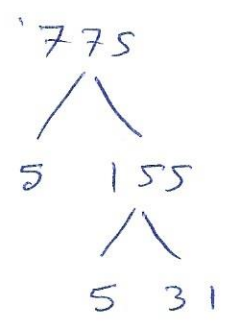
24. (a) $\frac{67}{40}$

$$\begin{array}{r}
1.675 \\
40 \overline{) 67.000} \\
\underline{40} \\
270 \\
\underline{-240} \\
300 \\
\underline{-280} \\
200 \\
\underline{200} \\
0
\end{array}$$

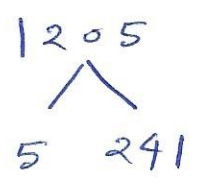
$0.625 = \frac{5}{8}$

$$\frac{625}{1000} = \frac{\cancel{5} \cdot \cancel{5} \cdot \cancel{5} \cdot 5}{2 \cdot 2 \cdot 2 \cdot \cancel{5} \cdot \cancel{5} \cdot 5} = \frac{5}{8}$$

$$\begin{aligned}
 25. \textcircled{b} \quad & 0.775 \\
 & = \frac{775}{1000} \\
 & = \frac{\cancel{5} \cdot \cancel{5} \cdot 31}{\cancel{2} \cdot \cancel{2} \cdot \cancel{2} \cdot \cancel{5} \cdot \cancel{5} \cdot \cancel{5}} \\
 & = \frac{31}{40}
 \end{aligned}$$



$$\begin{aligned}
 \# \quad & 2.1205 \\
 & = \frac{\cancel{2} \cancel{1} \cancel{2} \cancel{0} \cancel{5}}{\cancel{10000}} \\
 & = 2 \frac{1205}{10,000} \\
 & = 2 \frac{\cancel{5} \cdot 241}{\cancel{2} \cdot \cancel{2} \cdot \cancel{2} \cdot \cancel{2} \cdot \cancel{5} \cdot \cancel{5} \cdot \cancel{5} \cdot \cancel{5}} \\
 & = 2 \frac{241}{2,000}
 \end{aligned}$$

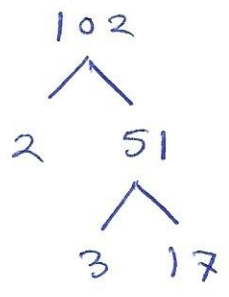


3.102

= 3 $\frac{102}{1000}$

= 3 $\frac{\cancel{2} \cdot 3 \cdot 17}{2 \cdot 2 \cdot 5 \cdot 5 \cdot \cancel{2} \cdot 5}$

= 3 $\frac{51}{500}$



26. $(1.2)^2 + (4.2)(1.08) - 3.4$

= 1.44 + $(4.2)(1.08) - 3.4$

= $1.44 + 4.536 - 3.4$

= 5.976 - 3.4

= 2.576

27. $75 - 2.3(0.74 + 2) - (2.1)^2$

= 75 - 2.3(2.74) - (2.1)^2

= 75 - $2.3(2.74) - (4.41)$

= 75 - $\overset{6.302}{\cancel{7.124}} - 4.41$

= 64.288

~~22~~

$$28. \quad 11 - 3.06 \div (3.95 - 0.35)$$

$$= 11 - 3.06 \div (3.6)$$

$$= 11 - 0.85$$

$$= 10.15$$

30. a.

0.5

0.505

0.5555

0.055

0.0505

0.5505

0.5055

$$\frac{11}{21}$$

0.0505, 0.055, 0.5, 0.505, 0.5055,

$\frac{11}{20}$, 0.5505, 0.5555.

30.6.

0.4400

0.0404

0.0440

0.4404

0.4040

0.4044

0.4444

$$\frac{1}{25} = 0.0400$$

$\frac{1}{25}$, 0.0404, 0.044, 0.404, 0.4044,
 0.44, 0.4404, 0.4444.