16.2. Exercise 12 (B)

16.11.21 Simplify the following

HW

1) $8\frac{3}{5} - (6\frac{1}{2} - 4\frac{1}{4} - 3\frac{3}{4})$

Ans $\frac{43}{5} - (\frac{13}{2} - \frac{17}{4} - \frac{15}{4})$

$= \frac{43}{5} - (\frac{13}{2} - \frac{2}{4})$

$= \frac{43}{5} - (\frac{26 - 2}{4})$

$= \frac{43}{5} - \frac{24}{4} = \frac{43}{5} - 6$

$= \frac{43 - 30}{5} = \frac{13}{5} = 2\frac{3}{5}$

2) $17\frac{1}{3} \div \{6\frac{2}{11} - (4 - 2\frac{3}{11} - 1)\}$

Ans $\frac{52}{3} \div \{\frac{68}{11} - (4 - \frac{25}{11} - 1)\}$

$\frac{52}{3} \div \{\frac{68}{11} - (\frac{44 - 14}{11})\}$

$\frac{52}{3} \div \{\frac{68}{11} - (\frac{44 - 14}{11})\}$

6.11.21

HW

Date
Page

$$\frac{52}{3} \div \left\{\frac{68}{11} - 30\right\}$$

$$\frac{52}{3} \div 38$$
$$11$$

$$\frac{\cancel{52}^{26}}{3} \times \frac{11}{\cancel{38}_{19}} = \frac{26 \times 11}{3 \times 19} = \frac{286}{57} = 5\frac{1}{57}$$

16.11.21

Hw

Date
Page

4) $8\frac{1}{4} + [4\frac{1}{2} + \{8\frac{1}{3} - (3\frac{1}{2} - 6\frac{3}{4} - 5\frac{1}{2})\}]$

Ans $\frac{33}{4} + [\frac{9}{2} + \{\frac{25}{3} - (\frac{7}{2} - \frac{27}{4} - \frac{11}{2})\}]$

$= \frac{33}{4} + [\frac{9}{2} + \{\frac{25}{3} - (\frac{7}{2} - \frac{5}{4})\}]$

$\frac{33}{4} + [\frac{9}{2} + \{\frac{25}{3} - \frac{9}{4}\}]$

$\frac{33}{4} + [\frac{9}{2} - \frac{73}{12}]$

$= \frac{33}{4} + \frac{19}{12} = \frac{118}{12} = 9\frac{10}{12}$

~~5~~

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

~~$5\frac{3}{8} - [0.2$~~

Ans $\frac{43}{8} - [\frac{18}{5} - \{\frac{11}{8} - (\frac{3}{4} - \frac{1}{2} - \frac{1}{4})\}]$

$\frac{43}{8} - [\frac{18}{5} - \{\frac{11}{8} - (\frac{3}{4} - \frac{1}{4})\}]$

$\frac{43}{8} - [\frac{18}{5} - \{\frac{11}{8} - \frac{2}{4}\}]$

16.11.21

Hw

$\frac{43}{8} - [\frac{18}{5} - \frac{7}{8}]$

$\frac{43}{8} - \frac{109}{40} = \frac{106}{40} \frac{53}{20} = \frac{53}{20} = 2\frac{13}{20}$

6. $4 - [5\frac{1}{2} - \{0.1 + (0.1 + 0.2$

6. $4 - [5\frac{1}{2} - \{2\frac{1}{2} + (1 + \frac{1}{6} + 1\frac{1}{4} - \frac{1}{12}$

Ans $4 - [5\frac{1}{2} - \{2\frac{1}{2}$

$4 - [\frac{11}{2} - \{\frac{5}{2} + (1 + \frac{1}{6} + \frac{5}{4} - 1$

$4 - [\frac{11}{2} - \{\frac{5}{2} + (\frac{29}{12} - \frac{1}{12})\}]$

$4 - [\frac{11}{2} - \{\frac{5}{2} + \frac{28}{12}\}]$

$4 - [\frac{11}{2} - \frac{58}{12}]$

$\frac{4}{1} - \frac{8}{12} = \frac{40}{12} \frac{20}{6} = \frac{10}{3} = 3\frac{1}{3}$

16.11.21

HW

7) $7.2 + [0.2 \text{ of } 10 = \{0.6 \div 0.3 - 0.08 - 0.6\}$

Ans $7.2 + [0.2 \text{ of } 10 - \{0.6 \div 0.3 - 0.2\}]$

$7.2 + [0.2 \text{ of } 10 - \{0.6 \div 0.3 - 0.2\}]$

$7.2 + [\frac{2}{10} \times 10 - \{0.6 \div 0.3 - 0.2\}]$

$7.2 + [2 - 0.6 \div 0.3 - 0.2]$

$7.2 + [2 - \{\frac{6}{10} \div \frac{3}{10} - 0.2\}]$

$7.2 + [2 - \{\frac{6}{10} \times \frac{10}{3} - 0.2\}]$

$7.2 + [2 - \{2 - 0.2\}]$

$7.2 + [2 - 1.8]$

$7.2 + 0.2$

$= 7.4$

16.11.21

HW

8) $16 \div [0.1 + \{0.1 + (0.1 + 0.2 - 0.1)\}]$

Ans $16 \div [0.1 + \{0.1 + (0.1 + 0.1)\}]$

$16 \div [0.1 + \{0.1 + 0.2\}]$

$16 \div [0.1 + 0.3]$

$16 \div 0.4$

$16 \div \frac{4}{10} = \frac{16}{1} \times \frac{10}{4} = 40$

10) $0.4 \div [1.5 \div \{0.6 \div (0.3 - 0.3 - 0.1)\}]$

Ans ~~$0.4 \div [1.5$~~

$0.4 \div [1.5 \div \{0.6 \div (0.3 - 0.2)\}]$

$0.4 \div [1.5 \div \{0.6 \div 0.1\}]$

$0.4 \div [1.5 \div 6]$

$0.4 \div 0.25$

$\frac{4}{10} \div \frac{25}{100} = \frac{4}{10} \times \frac{100}{25} = \frac{8}{5} = 1\frac{3}{5}$

16.11.21

HW

a) $8.8 \div [0.5 \text{ of } 15 - \{6.2 \div 2 - (8.4 - 7.6)\}]$

Ans 8.8

$8.8 \div [0.5 \text{ of } 15 - \{6.2 \div 2 - 0.8\}]$

$8.8 \div [\frac{5}{\cancel{10}_{2}} \times \cancel{15}^{3} - \{6.2 \div 2 - 0.8\}]$

$8.8 \div [7.5 - \{6.2 \div 2 - 0.8\}]$

$8.8 \div [7.5 - \{3.1 - 0.8\}]$

$8.8 \div [7.5 - 2.3]$

$8.8 \div 5.2 = \frac{88}{10} \div \frac{52}{10} =$

$\frac{\cancel{88}^{\cancel{44}^{22}}}{\cancel{10}} \times \frac{\cancel{10}}{\cancel{52}_{\cancel{26}_{13}}} = \frac{22}{13} = 1\frac{9}{13}$