

S. 53 / 5

$$\begin{aligned}
 \text{a. } & \frac{3}{5} \cdot \frac{5}{6} - \frac{4}{15} \cdot \left(\frac{3}{4} + \frac{1}{2} \right) \\
 &= \frac{3 \cdot 5}{5 \cdot 6} - \frac{4}{15} \cdot \left(\frac{3}{4} + \frac{2}{4} \right) \\
 &= \frac{1}{2} - \frac{4}{15} \cdot \frac{5}{4} \\
 &= \frac{1}{2} - \frac{1 \cdot 1}{3 \cdot 1} \\
 &= \frac{1}{2} - \frac{1}{3} \\
 &= \frac{3}{6} - \frac{2}{6} \\
 &= \frac{1}{6}
 \end{aligned}$$

$$\begin{aligned}
 \text{b. } & \left(\frac{8}{9} \cdot \frac{3}{4} + \frac{1}{6} \right) : \frac{5}{8} + \frac{2}{3} \\
 &= \left(\frac{8 \cdot 3}{9 \cdot 4} + \frac{1}{6} \right) : \frac{5}{8} + \frac{2}{3} \\
 &= \left(\frac{2 \cdot 1}{3 \cdot 1} + \frac{1}{6} \right) : \frac{5}{8} + \frac{2}{3} \\
 &= \left(\frac{2}{3} + \frac{1}{6} \right) : \frac{5}{8} + \frac{2}{3} \\
 &= \left(\frac{4}{6} + \frac{1}{6} \right) : \frac{5}{8} + \frac{2}{3} \\
 &= \frac{5}{6} : \frac{5}{8} + \frac{2}{3} \\
 &= \frac{5 \cdot 8}{6 \cdot 5} + \frac{2}{3} \\
 &= \frac{1 \cdot 4}{3 \cdot 1} + \frac{2}{3} \\
 &= \frac{4}{3} + \frac{2}{3} \\
 &= \frac{6}{3} \\
 &= 2
 \end{aligned}$$

$$\begin{aligned}
 \text{c. } & \left(\frac{1}{4} \cdot \frac{2}{3} + \frac{5}{3} \right) - \frac{8}{5} \cdot \frac{5}{12} \\
 &= \left(\frac{1 \cdot 1}{2 \cdot 3} + \frac{5}{3} \right) - \frac{8 \cdot 5}{5 \cdot 12} \\
 &= \left(\frac{1}{6} + \frac{5}{3} \right) - \frac{2 \cdot 1}{1 \cdot 3} \\
 &= \left(\frac{1}{6} + \frac{10}{6} \right) - \frac{2}{3} \\
 &= \frac{11}{6} - \frac{4}{6} \\
 &= \frac{7}{6} \\
 &= 1 \frac{1}{6}
 \end{aligned}$$

$$\begin{aligned}
 \text{d. } & \left(\frac{1}{4} : \frac{1}{8} + \frac{3}{4} \cdot \frac{2}{3} \right) - \frac{1}{4} \\
 &= \left(\frac{1 \cdot 8}{4 \cdot 1} + \frac{3 \cdot 2}{4 \cdot 3} \right) - \frac{1}{4} \\
 &= \left(\frac{1 \cdot 2}{1 \cdot 1} + \frac{1 \cdot 1}{2 \cdot 1} \right) - \frac{1}{4} \\
 &= \left(2 + \frac{1}{2} \right) - \frac{1}{4} \\
 &= \frac{5}{2} - \frac{1}{4} \\
 &= \frac{10}{4} - \frac{1}{4} \\
 &= \frac{9}{4} \\
 &= 2 \frac{1}{4}
 \end{aligned}$$

$$\begin{aligned}
\text{e. } & \left(\frac{4}{9} + \frac{5}{6}\right) \cdot \left(\frac{6}{7} - \frac{3}{14}\right) + \frac{5}{28} \\
& = \left(\frac{8}{18} + \frac{15}{18}\right) \cdot \left(\frac{12}{14} - \frac{3}{14}\right) + \frac{5}{28} \\
& = \frac{23}{18} \cdot \frac{9}{14} + \frac{5}{28} \\
& = \frac{23 \cdot 9}{18 \cdot 14} + \frac{5}{28} \\
& = \frac{23 \cdot 1}{2 \cdot 14} + \frac{5}{28} \\
& = \frac{23}{28} + \frac{5}{28} \\
& = \frac{28}{28} \\
& = 1
\end{aligned}$$

$$\begin{aligned}
\text{f. } & \left(\frac{1}{6} + \frac{2}{5}\right) \cdot \frac{15}{17} - \frac{1}{4} \div \frac{1}{2} \\
& = \left(\frac{5}{30} + \frac{12}{30}\right) \cdot \frac{15}{17} - \frac{1}{4} \div \frac{1}{2} \\
& = \frac{17}{30} \cdot \frac{15}{17} - \frac{1}{4} \cdot \frac{2}{1} \\
& = \frac{17 \cdot 15}{30 \cdot 17} + \frac{1 \cdot 2}{4 \cdot 1} \\
& = \frac{1 \cdot 1}{2 \cdot 1} + \frac{1 \cdot 1}{2 \cdot 1} \\
& = \frac{1}{2} + \frac{1}{2} \\
& = 1
\end{aligned}$$

$$\begin{aligned}
\text{g. } & \left(\frac{8}{9} \div \frac{8}{9} - \frac{1}{3}\right) \cdot \frac{6}{5} - \frac{1}{2} \\
& = \left(1 - \frac{1}{3}\right) \cdot \frac{6}{5} - \frac{1}{2} \\
& = \frac{2}{3} \cdot \frac{6}{5} - \frac{1}{2} \\
& = \frac{2 \cdot 6}{3 \cdot 5} - \frac{1}{2} \\
& = \frac{2 \cdot 2}{1 \cdot 5} - \frac{1}{2} \\
& = \frac{4}{5} - \frac{1}{2} \\
& = \frac{8}{10} - \frac{5}{10} \\
& = \frac{3}{10}
\end{aligned}$$

$$\begin{aligned}
\text{h. } & \frac{4}{5} + \frac{2}{7} \cdot \left(\frac{3}{5} + \frac{1}{10}\right) \cdot \frac{5}{6} \\
& = \frac{4}{5} + \frac{2}{7} \cdot \left(\frac{6}{10} + \frac{1}{10}\right) \cdot \frac{5}{6} \\
& = \frac{4}{5} + \frac{2}{7} \cdot \frac{7}{10} \cdot \frac{5}{6} \\
& = \frac{4}{5} + \frac{2 \cdot 7 \cdot 5}{7 \cdot 10 \cdot 6} \\
& = \frac{4}{5} + \frac{1 \cdot 1 \cdot 1}{1 \cdot 1 \cdot 6} \\
& = \frac{4}{5} + \frac{1}{6} \\
& = \frac{24}{30} + \frac{5}{30} \\
& = \frac{29}{30}
\end{aligned}$$