

Exercise - 23

$$1. \quad \frac{4}{5} \div \frac{7}{15} \text{ of } \frac{8}{9}$$

$$= \frac{4}{5} \div \frac{7}{15} \text{ of } \frac{8}{9}$$

$$= \frac{4}{5} \div \frac{56}{135}$$

$$= \frac{4}{5} \times \frac{135}{56} = \frac{27}{14}$$

$$3. \quad 5 \frac{1}{4} \div \frac{3}{7} \times \frac{1}{2}$$

$$= \frac{21}{4} \times \frac{7}{3} \times \frac{1}{2}$$

$$= \frac{49}{8}$$

$$5. \quad \frac{7}{8} + 2 \frac{5}{6} - \frac{11}{12} \times 3 \frac{3}{11}$$

$$= \frac{(7 \times 3) + (17 \times 4)}{24} - \frac{11}{12} \times \frac{36}{11}$$

$$= \frac{89}{24} - \frac{3}{1}$$

$$= \frac{89 - 72}{24} = \frac{17}{24}$$

$$7. \quad \frac{1}{2} + 1 \frac{1}{2} \div 1 \frac{1}{2} \times \frac{2}{3} - \frac{1}{4}$$

$$= \frac{1}{2} + \frac{3}{2} \times \frac{2}{3} \times \frac{2}{3} - \frac{1}{4}$$

$$= \frac{1}{2} + \frac{2}{3} - \frac{1}{4}$$

$$= \frac{3+4}{6} - \frac{1}{4}$$

$$= \frac{14 - 3}{12} = \frac{11}{12}$$

$$2. \quad \frac{4}{5} \div \frac{7}{15} \times \frac{8}{9}$$

$$= \frac{4}{5} \times \frac{15}{7} \times \frac{8}{9}$$

$$= \frac{32}{21}$$

$$4. \quad 5 \frac{1}{4} \div \frac{3}{7} \text{ of } \frac{1}{2}$$

$$= \frac{21}{4} \div \frac{3}{7} \text{ of } \frac{1}{2}$$

$$= \frac{21}{4} \div \frac{3}{14}$$

$$= \frac{21}{4} \times \frac{14}{3} = \frac{49}{2}$$

$$6. \quad 3 \frac{3}{4} \div \frac{7}{8} \times 4 \frac{1}{6} \times 1 \frac{13}{15}$$

$$= \frac{15}{4} \times \frac{8}{7} \times \frac{25}{6} \times \frac{28}{15}$$

$$= \frac{100}{3}$$

$$8. \quad 1 \frac{4}{5} - 2 \frac{3}{4} \text{ of } \frac{8}{11} + \frac{3}{8} \div \frac{9}{10}$$

$$= \frac{9}{5} - \frac{21}{4} \text{ of } \frac{8}{11} + \frac{3}{8} \times \frac{10}{9}$$

$$= \frac{9}{5} - \frac{2}{1} + \frac{5}{12}$$

$$= \frac{9}{5} - \frac{24}{12} + \frac{5}{12} = \frac{5}{12} + \frac{9}{5} - \frac{2}{1}$$

$$= \frac{9}{5} - \frac{24}{12} + \frac{5}{12} = \frac{25 + 108}{60} - \frac{2}{1}$$

$$= \frac{133}{60} - \frac{2}{1}$$

$$= \frac{133 - 120}{60} = \frac{13}{60}$$

$$\begin{aligned}
 9. \quad & 9 \frac{1}{3} \div \frac{3}{5} \text{ of } \frac{7}{9} \times \frac{4}{5} \\
 & = \frac{28}{3} \div \frac{3}{5} \text{ of } \frac{7}{9} \times \frac{4}{5} \\
 & = \frac{28}{3} \div \frac{7}{15} \times \frac{4}{5} \\
 & = \frac{28}{3} \times \frac{15}{7} \times \frac{4}{5} \\
 & = \frac{16}{1} = 16
 \end{aligned}$$

$$\begin{aligned}
 11. \quad & 7 \frac{1}{3} \div 3 \frac{2}{3} \text{ of } 2 + 4 \frac{1}{2} \div 2 \frac{1}{4} - 2 \frac{1}{2} \\
 & = \frac{22}{3} \div \frac{11}{3} \text{ of } \frac{2}{1} + \frac{9}{2} \div \frac{9}{4} - \frac{5}{2} \\
 & = \frac{22}{3} \div \frac{22}{3} + \frac{1}{2} \times \frac{4^2}{9} - \frac{5}{2} \\
 & = 1 + \frac{2}{9} - \frac{5}{2} \\
 & = 3 - \frac{5}{2} = \frac{6-5}{2} = \frac{1}{2}
 \end{aligned}$$

$$\begin{aligned}
 12. \quad & 25 \text{ of } \frac{3}{5} \div 1 \frac{9}{8} + 3 \text{ of } \frac{1}{3} \div 10 \\
 & = \frac{5}{25} \text{ of } \frac{3}{5} \div \frac{5}{3} + \frac{1}{3} \text{ of } \frac{1}{3} \div \frac{10}{1} \\
 & = \frac{3}{15} \times \frac{3}{5} + 1 \times \frac{1}{10} \\
 & = 9 + \frac{1}{10} = \frac{90+1}{10} = \frac{91}{10}
 \end{aligned}$$

$$\begin{aligned}
 10. \quad & \frac{3}{5} \text{ of } 1 \frac{3}{7} \div \frac{2}{5} + \frac{1}{2} + \frac{2}{3} \times \frac{6}{7} \\
 & = \frac{3}{5} \text{ of } \frac{10^2}{7} \div \frac{2}{5} - \frac{1}{2} + \frac{2}{3} \times \frac{6^2}{7} \\
 & = \frac{6}{7} \div \frac{2}{5} - \frac{1}{2} + \frac{4}{7} \\
 & = \frac{3}{7} \times \frac{5}{2} - \frac{1}{2} + \frac{4}{7} \\
 & = \frac{15}{7} - \frac{1}{2} + \frac{4}{7} \\
 & = \frac{30-7}{14} + \frac{4}{7} \\
 & = \frac{28}{14} + \frac{4}{7} = \frac{28+8}{14} = \frac{20}{14}
 \end{aligned}$$