

Dividing Mixed Numbers

Date _____ Period _____

Divide.

1) $1\frac{4}{10} \div 1\frac{8}{9}$

2) $1\frac{3}{17} \div 1\frac{9}{18}$

3) $5\frac{2}{5} \div 4\frac{3}{6}$

4) $1\frac{1}{21} \div 1\frac{1}{25}$

5) $3\frac{3}{5} \div 1\frac{2}{14}$

6) $2\frac{4}{8} \div 1\frac{1}{5}$

7) $3\frac{1}{8} \div 1\frac{1}{7}$

8) $1\frac{4}{12} \div 2\frac{2}{13}$

9) $3\frac{4}{5} \div 4\frac{1}{7}$

Dividing Mixed Numbers

Date _____ Period _____

Divide.

1) $1\frac{4}{10} \div 1\frac{8}{9}$

Answer: $1\frac{63}{85}$

2) $1\frac{3}{17} \div 1\frac{9}{18}$

Answer: $\frac{40}{51}$

3) $5\frac{2}{5} \div 4\frac{3}{6}$

Answer: $1\frac{1}{5}$

4) $1\frac{1}{21} \div 1\frac{1}{25}$

Answer: $1\frac{2}{273}$

5) $3\frac{3}{5} \div 1\frac{2}{14}$

Answer: $3\frac{3}{20}$

6) $2\frac{4}{8} \div 1\frac{1}{5}$

Answer: $2\frac{1}{12}$

7) $3\frac{1}{8} \div 1\frac{1}{7}$

Answer: $2\frac{47}{64}$

8) $1\frac{4}{12} \div 2\frac{2}{13}$

Answer: $\frac{13}{21}$

9) $3\frac{4}{5} \div 4\frac{1}{7}$

Answer: $\frac{133}{145}$

Solution Steps

1) $1\frac{4}{10} \div 1\frac{8}{9}$

Convert the mixed numbers to improper fractions

$$1\frac{4}{10} = \frac{4 + 1 * 10}{10} = \frac{14}{10}$$

$$1\frac{8}{9} = \frac{8 + 1 * 9}{9} = \frac{17}{9}$$

To divide $\frac{14}{10}$ by $\frac{17}{9}$, multiply

$$\frac{14}{10} \text{ by } \frac{9}{17}$$

$$\frac{14}{10} * \frac{9}{17}$$

$$\frac{(14 * 9)}{(10 * 17)}$$

$$\frac{(14^7 * 9)}{(10^5 * 17)}$$

$$\frac{63}{85}$$

$$\frac{63}{85}$$

4) $1\frac{1}{21} \div 1\frac{1}{25}$

Convert the mixed numbers to improper fractions

$$1\frac{1}{21} = \frac{1 + 1 * 21}{21} = \frac{22}{21}$$

$$1\frac{1}{25} = \frac{1 + 1 * 25}{25} = \frac{26}{25}$$

To divide $\frac{22}{21}$ by $\frac{26}{25}$, multiply

$$\frac{22}{21} \text{ by } \frac{25}{26}$$

$$\frac{22}{21} * \frac{25}{26}$$

$$\frac{(22 * 25)}{(21 * 26)}$$

$$\frac{(22^1 * 25)}{(21 * 26^1)}$$

$$\frac{(21 * 26^1)}{2}$$

$$1\frac{1}{273}$$

2) $1\frac{3}{17} \div 1\frac{9}{18}$

Convert the mixed numbers to improper fractions

$$1\frac{3}{17} = \frac{3 + 1 * 17}{17} = \frac{20}{17}$$

$$1\frac{9}{18} = \frac{9 + 1 * 18}{18} = \frac{27}{18}$$

To divide $\frac{20}{17}$ by $\frac{27}{18}$, multiply

$$\frac{20}{17} \text{ by } \frac{18}{27}$$

$$\frac{20}{17} * \frac{18}{27}$$

$$\frac{(20 * 18)}{(17 * 27)}$$

$$\frac{(20 * 18^2)}{(17 * 27^3)}$$

$$\frac{40}{51}$$

$$\frac{40}{51}$$

5) $3\frac{3}{5} \div 1\frac{2}{14}$

Convert the mixed numbers to improper fractions

$$3\frac{3}{5} = \frac{3 * 5 + 3}{5} = \frac{18}{5}$$

$$1\frac{2}{14} = \frac{1 * 14 + 2}{14} = \frac{16}{14}$$

To divide $\frac{18}{5}$ by $\frac{16}{14}$, multiply

$$\frac{18}{5} \text{ by } \frac{14}{16}$$

$$\frac{18}{5} * \frac{14}{16}$$

$$\frac{(18 * 14)}{(5 * 16)}$$

$$\frac{(18^9 * 14^7)}{(5 * 8^4)}$$

$$\frac{3}{20}$$

$$3\frac{3}{20}$$

3) $5\frac{2}{5} \div 4\frac{3}{6}$

Convert the mixed numbers to improper fractions

$$5\frac{2}{5} = \frac{5 * 5 + 2}{5} = \frac{27}{5}$$

$$4\frac{3}{6} = \frac{4 * 6 + 3}{6} = \frac{27}{6}$$

To divide $\frac{27}{5}$ by $\frac{27}{6}$, multiply

$$\frac{27}{5} \text{ by } \frac{6}{27}$$

$$\frac{27}{5} * \frac{6}{27}$$

$$\frac{(27 * 6)}{(5 * 27)}$$

$$\frac{(27^1 * 6)}{(5 * 27^1)}$$

$$\frac{1}{5}$$

$$1\frac{1}{5}$$

6) $2\frac{4}{8} \div 1\frac{1}{5}$

Convert the mixed numbers to improper fractions

$$2\frac{4}{8} = \frac{2 * 8 + 4}{8} = \frac{20}{8}$$

$$1\frac{1}{5} = \frac{1 * 5 + 1}{5} = \frac{6}{5}$$

To divide $\frac{20}{8}$ by $\frac{6}{5}$, multiply

$$\frac{20}{8} \text{ by } \frac{5}{6}$$

$$\frac{20}{8} * \frac{5}{6}$$

$$\frac{(20 * 5)}{(8 * 6)}$$

$$\frac{(20^1 * 5)}{(8^2 * 6^3)}$$

$$\frac{1}{3}$$

$$8\frac{1}{3}$$

$$7) 3\frac{1}{8} \div 1\frac{1}{7}$$

Convert the mixed numbers to improper fractions

$$3\frac{1}{8} = \frac{1 \cdot 3 \cdot 8 + 1}{8} = \frac{25}{8}$$

$$1\frac{1}{7} = \frac{1 \cdot 7 + 1}{7} = \frac{8}{7}$$

To divide $\frac{25}{8}$ by $\frac{8}{7}$, multiply

$$\frac{25}{8} \text{ by } \frac{7}{8}$$

$$\frac{8 \cdot 8}{(25 \cdot 7)}$$

$$\frac{(8 \cdot 8)}{47}$$

$$2\frac{64}{47}$$

$$8) 1\frac{4}{12} \div 2\frac{2}{13}$$

Convert the mixed numbers to improper fractions

$$1\frac{4}{12} = \frac{1 \cdot 12 + 4}{12} = \frac{16}{12}$$

$$2\frac{2}{13} = \frac{2 \cdot 13 + 2}{13} = \frac{28}{13}$$

To divide $\frac{16}{12}$ by $\frac{28}{13}$, multiply

$$\frac{16}{12} \text{ by } \frac{13}{28}$$

$$\frac{12 \cdot 13}{(16 \cdot 28)}$$

$$\frac{(12 \cdot 13)}{(16 \cdot 28)}$$

$$\frac{(16^4 \cdot 13)}{(12^3 \cdot 28^7)}$$

$$\frac{10}{21}$$

$$9) 3\frac{4}{5} \div 4\frac{1}{7}$$

Convert the mixed numbers to improper fractions

$$3\frac{4}{5} = \frac{3 \cdot 5 + 4}{5} = \frac{19}{5}$$

$$4\frac{1}{7} = \frac{4 \cdot 7 + 1}{7} = \frac{29}{7}$$

To divide $\frac{19}{5}$ by $\frac{29}{7}$, multiply

$$\frac{19}{5} \text{ by } \frac{7}{29}$$

$$\frac{5 \cdot 29}{(19 \cdot 7)}$$

$$\frac{(5 \cdot 29)}{133}$$

$$145$$