

Dividing Mixed Numbers

Date _____ Period _____

Divide.

1) $1\frac{2}{4} \div 2\frac{3}{13}$

2) $2\frac{3}{7} \div 2\frac{1}{14}$

3) $1\frac{9}{18} \div 1\frac{6}{8}$

4) $1\frac{3}{15} \div 2\frac{6}{7}$

5) $1\frac{2}{4} \div 1\frac{4}{21}$

6) $1\frac{7}{18} \div 3\frac{2}{5}$

7) $1\frac{9}{11} \div 1\frac{3}{14}$

8) $1\frac{13}{15} \div 2\frac{1}{4}$

9) $2\frac{2}{11} \div 1\frac{3}{13}$

Dividing Mixed Numbers

Date _____ Period _____

Divide.

1) $1\frac{2}{4} \div 2\frac{3}{13}$

Answer: $1\frac{39}{58}$

2) $2\frac{3}{7} \div 2\frac{1}{14}$

Answer: $1\frac{5}{29}$

3) $1\frac{9}{18} \div 1\frac{6}{8}$

Answer: $\frac{6}{7}$

4) $1\frac{3}{15} \div 2\frac{6}{7}$

Answer: $\frac{21}{50}$

5) $1\frac{2}{4} \div 1\frac{4}{21}$

Answer: $1\frac{13}{50}$

6) $1\frac{7}{18} \div 3\frac{2}{5}$

Answer: $\frac{125}{306}$

7) $1\frac{9}{11} \div 1\frac{3}{14}$

Answer: $1\frac{93}{187}$

8) $1\frac{13}{15} \div 2\frac{1}{4}$

Answer: $\frac{112}{135}$

9) $2\frac{2}{11} \div 1\frac{3}{13}$

Answer: $1\frac{17}{22}$

Solution Steps

1) $1\frac{2}{4} \div 2\frac{3}{13}$

Convert the mixed numbers to improper fractions

$$1\frac{2}{4} = \frac{1 \cdot 4 + 2}{4} = \frac{6}{4}$$

$$2\frac{3}{13} = \frac{2 \cdot 13 + 3}{13} = \frac{29}{13}$$

To divide $\frac{6}{4}$ by $\frac{29}{13}$, multiply

$$\frac{6}{4} \text{ by } \frac{13}{29}$$

$$\frac{6}{4} \cdot \frac{13}{29}$$

$$\frac{(6 \cdot 13)}{(4 \cdot 29)}$$

$$\frac{(6^3 \cdot 13)}{(4^2 \cdot 29)}$$

$$\frac{39}{58}$$

4) $1\frac{3}{15} \div 2\frac{6}{7}$

Convert the mixed numbers to improper fractions

$$1\frac{3}{15} = \frac{1 \cdot 15 + 3}{15} = \frac{18}{15}$$

$$2\frac{6}{7} = \frac{2 \cdot 7 + 6}{7} = \frac{20}{7}$$

To divide $\frac{18}{15}$ by $\frac{20}{7}$, multiply

$$\frac{18}{15} \text{ by } \frac{7}{20}$$

$$\frac{18}{15} \cdot \frac{7}{20}$$

$$\frac{(18 \cdot 7)}{(15 \cdot 20)}$$

$$\frac{(18^9 \cdot 7)}{(15^5 \cdot 20^{10})}$$

$$\frac{13}{50}$$

2) $2\frac{3}{7} \div 2\frac{1}{14}$

Convert the mixed numbers to improper fractions

$$2\frac{3}{7} = \frac{2 \cdot 7 + 3}{7} = \frac{17}{7}$$

$$2\frac{1}{14} = \frac{2 \cdot 14 + 1}{14} = \frac{29}{14}$$

To divide $\frac{17}{7}$ by $\frac{29}{14}$, multiply

$$\frac{17}{7} \text{ by } \frac{14}{29}$$

$$\frac{17}{7} \cdot \frac{14}{29}$$

$$\frac{(17 \cdot 14)}{(7 \cdot 29)}$$

$$\frac{(17 \cdot 14^2)}{(7^1 \cdot 29)}$$

$$\frac{1}{29}$$

5) $1\frac{2}{4} \div 1\frac{4}{21}$

Convert the mixed numbers to improper fractions

$$1\frac{2}{4} = \frac{1 \cdot 4 + 2}{4} = \frac{6}{4}$$

$$1\frac{4}{21} = \frac{1 \cdot 21 + 4}{21} = \frac{25}{21}$$

To divide $\frac{6}{4}$ by $\frac{25}{21}$, multiply

$$\frac{6}{4} \text{ by } \frac{21}{25}$$

$$\frac{6}{4} \cdot \frac{21}{25}$$

$$\frac{(6 \cdot 21)}{(4 \cdot 25)}$$

$$\frac{(6^3 \cdot 21)}{(4^2 \cdot 25)}$$

$$\frac{13}{50}$$

3) $1\frac{9}{18} \div 1\frac{6}{8}$

Convert the mixed numbers to improper fractions

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

$$1\frac{6}{8} = \frac{1 \cdot 8 + 6}{8} = \frac{14}{8}$$

To divide $\frac{27}{18}$ by $\frac{14}{8}$, multiply

$$\frac{27}{18} \text{ by } \frac{8}{14}$$

$$\frac{27}{18} \cdot \frac{8}{14}$$

$$\frac{(27 \cdot 8)}{(18 \cdot 14)}$$

$$\frac{(27^3 \cdot 8^4)}{(2^1 \cdot 14^7)}$$

$$1\frac{7}{8}$$

6) $1\frac{7}{18} \div 3\frac{2}{5}$

Convert the mixed numbers to improper fractions

$$1\frac{7}{18} = \frac{1 \cdot 18 + 7}{18} = \frac{25}{18}$$

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

To divide $\frac{25}{18}$ by $\frac{17}{5}$, multiply

$$\frac{25}{18} \text{ by } \frac{5}{17}$$

$$\frac{25}{18} \cdot \frac{5}{17}$$

$$\frac{(25 \cdot 5)}{(18 \cdot 17)}$$

$$\frac{125}{306}$$

$$7) 1\frac{9}{11} \div 1\frac{3}{14}$$

Convert the mixed numbers to improper fractions

$$1\frac{9}{11} = \frac{1 * 11 + 9}{11} = \frac{20}{11}$$

$$1\frac{3}{14} = \frac{1 * 14 + 3}{14} = \frac{17}{14}$$

To divide $\frac{20}{11}$ by $\frac{17}{14}$, multiply

$$\frac{20}{11} \text{ by } \frac{14}{17}$$

$$\frac{20 * 14}{11 * 17}$$

$$\frac{(20 * 14)}{(11 * 17)}$$

$$\frac{280}{187}$$

$$1\frac{280}{187}$$

$$8) 1\frac{13}{15} \div 2\frac{1}{4}$$

Convert the mixed numbers to improper fractions

$$1\frac{13}{15} = \frac{1 * 15 + 13}{15} = \frac{28}{15}$$

$$2\frac{1}{4} = \frac{2 * 4 + 1}{4} = \frac{9}{4}$$

To divide $\frac{28}{15}$ by $\frac{9}{4}$, multiply

$$\frac{28}{15} \text{ by } \frac{4}{9}$$

$$\frac{28 * 4}{15 * 9}$$

$$\frac{(28 * 4)}{(15 * 9)}$$

$$\frac{112}{135}$$

$$1\frac{112}{135}$$

$$9) 2\frac{2}{11} \div 1\frac{3}{13}$$

Convert the mixed numbers to improper fractions

$$2\frac{2}{11} = \frac{2 * 11 + 2}{11} = \frac{24}{11}$$

$$1\frac{3}{13} = \frac{1 * 13 + 3}{13} = \frac{16}{13}$$

To divide $\frac{24}{11}$ by $\frac{16}{13}$, multiply

$$\frac{24}{11} \text{ by } \frac{13}{16}$$

$$\frac{24 * 13}{11 * 16}$$

$$\frac{(24 * 13)}{(11 * 16)}$$

$$\frac{(24^3 * 13)}{(11 * 16^2)}$$

$$1\frac{312}{176}$$