Name _____

Date _____

Reciprocals

Preparing to Divide Fractions

Reciprocals – Fractions turned upside down (inverted).

- Find the fraction reciprocal by flipping it: $\frac{4}{5}$ becomes $\frac{5}{4}$, which is $1\frac{4}{5}$ in lowest terms.
- Mathematically a reciprocal means 1 ÷ (that number).

A. $\frac{9}{8} \rightarrow \frac{8}{9}$

B. $\frac{2}{5} \rightarrow \frac{5}{2} \rightarrow 2\frac{1}{2}$

C. $2\frac{1}{3} \rightarrow \frac{7}{3} \rightarrow \frac{3}{7}$

D. $6 \rightarrow \frac{1}{6}$

Directions: These are quick problems; show work as needed; use lowest terms. Then shade the box if the answer is a mixed number.

How many letters are in the Hawaiian alphabet?

1. $\frac{6}{5} \rightarrow$	**2.** $5\frac{1}{9} \rightarrow$	**3.** $\frac{11}{3} \rightarrow$	**4.** $\frac{1}{11} \rightarrow$
5. $\frac{5}{12} \rightarrow$	**6.** $\frac{7}{10} \rightarrow$	**7.** $3\frac{1}{8} \rightarrow$	**8.** $\frac{2}{9} \rightarrow$
9. $\frac{3}{17} \rightarrow$	**10.** $3\frac{1}{10} \rightarrow$	**11.** $5\frac{1}{4} \rightarrow$	**12.** $\frac{9}{10} \rightarrow$
13. $\frac{3}{16} \rightarrow$	**14.** $\frac{5}{7} \rightarrow$	**15.** $\frac{5}{10} \rightarrow$	**16.** $\frac{8}{12} \rightarrow$
17. $\frac{6}{10} \rightarrow$	**18.** $5\frac{2}{3} \rightarrow$	**19.** $6\frac{1}{4} \rightarrow$	**20.** $\frac{9}{19} \rightarrow$
21. $\frac{5}{9} \rightarrow$	**22.** $\frac{8}{13} \rightarrow$	**23.** $\frac{1}{5} \rightarrow$	**24.** $\frac{15}{24} \rightarrow$

Find each missing number.

21. $\frac{7}{3} \times n = 1$	**22.** $3 \times n = 1$	**23.** $n \times \frac{5}{6} = 1$	**24.** $2\frac{1}{3} \times n = 1$
25. $1\frac{4}{7} \times n = 1$	**26.** $6\frac{2}{3} \times n = 1$	**27.** $n \times \frac{9}{10} = 1$	**28.** $1 = \frac{3}{16} \times n$

ANSWER KEY

Reciprocals

Preparing to Divide Fractions

Reciprocals – Fractions turned upside down (inverted).

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D. $6 \rightarrow \frac{1}{6}$

Directions: These are quick problems; show work as needed; use lowest terms. Then shade the box if the answer is a mixed number.

How many letters are in the Hawaiian alphabet? 13 (upside down)

1. $\frac{6}{5} \rightarrow \frac{5}{6}$	**2.** $5\frac{1}{9} \rightarrow \frac{9}{46}$	**3.** $\frac{11}{3} \rightarrow \frac{3}{11}$	**4.** $\frac{1}{11} \rightarrow 11$
5. $\frac{5}{12} \rightarrow 2\frac{2}{5}$	**6.** $\frac{7}{10} \rightarrow 1\frac{3}{7}$	**7.** $3\frac{1}{8} \rightarrow \frac{8}{25}$	**8.** $\frac{2}{9} \rightarrow 4\frac{1}{2}$
9. $\frac{3}{17} \rightarrow 5\frac{2}{3}$	**10.** $3\frac{1}{10} \rightarrow \frac{10}{31}$	**11.** $5\frac{1}{4} \rightarrow \frac{4}{21}$	**12.** $\frac{9}{10} \rightarrow 1\frac{1}{9}$
13. $\frac{3}{16} \rightarrow 5\frac{1}{3}$	**14.** $\frac{5}{7} \rightarrow 1\frac{2}{5}$	**15.** $\frac{5}{10} \rightarrow 2$	**16.** $\frac{8}{12} \rightarrow 1\frac{1}{2}$
17. $\frac{6}{10} \rightarrow 1\frac{2}{3}$	**18.** $5\frac{2}{3} \rightarrow \frac{3}{17}$	**19.** $6\frac{1}{4} \rightarrow \frac{4}{25}$	**20.** $\frac{9}{19} \rightarrow 2\frac{1}{9}$
21. $\frac{5}{9} \rightarrow 1\frac{4}{5}$	**22.** $\frac{8}{13} \rightarrow 1\frac{5}{8}$	**23.** $\frac{1}{5} \rightarrow 5$	**24.** $\frac{15}{24} \rightarrow 1\frac{3}{5}$

Find each missing number.

21. $\frac{7}{3} \times n = 1$ $\frac{3}{7}$	**22.** $3 \times n = 1$ $\frac{1}{3}$	**23.** $n \times \frac{5}{6} = 1$ $\frac{6}{5}$	**24.** $2\frac{1}{3} \times n = 1$ $\frac{3}{7}$
25. $1\frac{4}{7} \times n = 1$ $\frac{7}{11}$	**26.** $6\frac{2}{3} \times n = 1$ $\frac{3}{20}$	**27.** $n \times \frac{9}{10} = 1$ $\frac{10}{9}$	**28.** $1 = \frac{3}{16} \times n$ $\frac{16}{3}$