

7-5 Dividing Fractions

$$5 \div \frac{1}{4} = 20$$



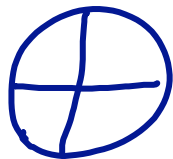
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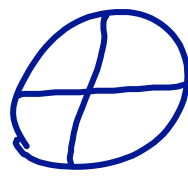
8



12



16



20

Reciprocal - any 2# whose product = 1

* To find for a frac. \rightarrow flip the frac.

$$\frac{1}{4} \cdot \boxed{\frac{4}{1}} = 1$$

$$\frac{3}{5} \text{ is } \frac{5}{3}$$

$$15 \text{ is } \frac{1}{15}$$

↑

remember to put
over 1

$$\frac{\frac{2}{3}}{\frac{5}{7}} \cdot \left(\frac{\frac{7}{5}}{\frac{5}{7}} \right) = \frac{\frac{2}{3} \cdot \frac{7}{5}}{1} = \frac{2}{3} \cdot \frac{7}{5} = \boxed{\frac{14}{15}}$$

$$\frac{2}{3} \div \frac{5}{7}$$

$$\frac{2}{3} \cdot \frac{7}{5}$$

Ex 1) $\frac{5}{8} \div \frac{3}{4}$
 $\frac{5}{\cancel{8}} \cdot \frac{\cancel{4}^1}{3} = \boxed{\frac{5}{6}}$

2) $\frac{3}{4} \div \frac{2}{5} = m$
 $\frac{3}{4} \cdot \frac{5}{2} = m$

$\boxed{\frac{15}{8} = m}$

* BIG SECRET!

You don't divide \rightarrow
leave 1st frac. alone,
change \div to \times ,
and find reciprocal
of 2nd frac.

Now work it out

$$3) \frac{3}{4} \div 6 \rightarrow \text{really} \frac{6}{1}$$
$$\frac{3}{4} \cdot \frac{1}{6} = \frac{3}{24} = \frac{1}{8}$$
$$\boxed{\frac{1}{8}}$$

$$4) \frac{7}{9} \div \frac{1}{3}$$
$$\frac{7}{9} \cdot \frac{3}{1} = \frac{7}{3}$$
$$\boxed{\frac{7}{3}}$$

5) Evaluate $c \div d$ if $c = 21$ and $d = \frac{7}{8}$.

$$21 \div \frac{7}{8}$$
$$21 \cdot \frac{8}{7} = \frac{24}{1} = \boxed{24}$$

7-6 Dividing Mixed #s

* MUST change/rename mixed# as improper frac.

Ex

$$1) b = 2\frac{5}{8} \div 1\frac{3}{4}$$

$$b = \frac{21}{8} \div \frac{7}{4}$$

$$b = \frac{\cancel{21}^3}{\cancel{8}_2} \cdot \frac{\cancel{4}^1}{7}$$

$$\boxed{b = \frac{3}{2}}$$

$$2) 2\frac{1}{3} \div \frac{7}{9} = e$$

$$\frac{\cancel{17}^3}{\cancel{3}_1} \cdot \frac{\cancel{9}^3}{7} = e$$

$$\frac{3}{1} = e$$

$$\boxed{3 = e}$$

$$3) 5 \div 1\frac{3}{7} = k$$

$$\frac{5}{1} \div \frac{10}{7} = k$$

$$\frac{\cancel{5}^1}{1} \cdot \frac{7}{\cancel{10}_2} = k$$

$$\boxed{\frac{7}{2} = k}$$

$$4) 7\frac{1}{2} \div 1\frac{2}{3} = j$$

$$\frac{15}{2} \div \frac{5}{3} = j$$

$$\frac{3\cancel{15}}{2} \cdot \frac{3}{\cancel{5}_1} = j$$

$$\boxed{\frac{9}{2} = j}$$

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$$a) \frac{1}{2} \cdot \frac{1}{2}$$
$$\frac{1}{2} \cdot \frac{3}{2} = \boxed{\frac{3}{4} \text{ beat}}$$

$$b) \frac{1}{4} \cdot \frac{1}{2}$$
$$\frac{1}{4} \cdot \frac{3}{2} = \boxed{\frac{3}{8} \text{ beat}}$$

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$$13\frac{1}{2} \div \frac{3}{8}$$

$$\frac{27}{2} \cdot \frac{8}{3}$$

$$\boxed{36 \text{ slices}}$$