

MULTIPLYING AND DIVIDING RATIONAL NUMBERS

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

$$-\frac{15}{11}$$

$$\frac{12}{7}$$

} Improper
Fractions

$$1\frac{3}{5}$$

$$4\frac{8}{11}$$

} Mixed Numbers

Write $2\frac{3}{5}$ as an improper fraction.

$$2\frac{3}{5} \quad (5)(2) + 3 = 13$$

$$= \frac{13}{5}$$

$$4\frac{12}{13}$$

$$(13)(4) + 12 = 64$$

$$= \frac{64}{13}$$

MULTIPLY FRACTIONS

- Multiply across

$$\frac{2}{3} \cdot \frac{1}{5} = \boxed{\frac{2}{15}}$$

$$\frac{3}{4} \cdot 2\frac{1}{3} \left. \begin{array}{l} \text{Rewrite} \\ (2)(3) + 1 = 7 \end{array} \right\} \frac{7}{3}$$

$$\frac{3}{4} \cdot \frac{7}{3} = \frac{21}{12} \begin{array}{l} \div 3 \\ \div 3 \end{array}$$

$$= \boxed{\frac{7}{4}}$$

$$\frac{3}{5} \cdot 1\frac{1}{2}$$

$$\frac{3}{5} \cdot \frac{3}{2} = \frac{9}{10}$$

RECIPROCAL

$$\frac{2}{5}$$



Reciprocal:

$$\frac{5}{2}$$

$$-\frac{2}{7}$$



$$-\frac{7}{2}$$

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



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

$$1\frac{1}{2} = \frac{3}{2}$$



$$\frac{2}{3}$$

DIVIDING FRACTIONS

- Change the problem to multiply by the reciprocal.

$$\frac{1}{3} \div \frac{1}{2}$$
$$\frac{1}{3} \cdot \frac{2}{1}$$

Multiply by the reciprocal

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

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

multiply by
the reciprocal

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

$$\frac{9}{16}$$

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

Change to improper fraction

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

Multiply by the reciprocal

$$\frac{3}{4} \cdot \frac{2}{5}$$

$$\frac{6}{20}$$

Reduce

$$\boxed{\frac{3}{10}}$$