36.) $0.\overline{2} = \frac{2}{9}$

$10n = 2.\overline{2}$

$-1n = 0.\overline{2}$

$\frac{9}{9}n = \frac{2}{9}$

$n = \frac{2}{9}$

No, they are equal to one another.

38.) 0.41 (<) $\frac{15}{36} = 0.41\overline{6}$

$0.4\overline{0}$
$0.41\overline{6}$

16) $-2.3125 = -2\frac{5}{16}$

-2.3125

24.) 1.8 1.07 $1.\frac{8}{9}$ $1\frac{1}{2}$

$1.\overline{8}$ 1.5

3. 1.80
1. ~~1.07~~
4. 1.88
2. ~~1.50~~

$1.07, 1\frac{1}{2}, 1.8, 1\frac{8}{9}$

2-3 Multiplying Rational Numbers

To multiply fractions, multiply the numerators and multiply the denominators.

$$\frac{n}{d} \times \frac{n}{d} = \frac{\text{numerator} \times \text{numerator}}{\text{denonominator} \times \text{denominator}}$$

Always Reduce!

$$\frac{4}{9} \times \frac{3}{5} = \frac{12}{45} = \frac{4}{15}$$

Canceling

$$\frac{4}{\cancel{9}\,3} \times \frac{\cancel{3}\,1}{5} = \frac{4}{15}$$

$\div 3 = 3$ $\quad \div 3 = 1$

$$-\frac{5}{\cancel{6}_{2}} \cdot \frac{\cancel{3}^{1}}{8} = -\frac{5}{16}$$

a.) $$\frac{\cancel{8}^{2}}{\cancel{9}_{3}} \cdot \frac{\cancel{3}^{1}}{\cancel{4}_{1}} = \frac{2}{3}$$

$4\frac{1}{2} \cdot 2\frac{2}{3} =$

$\frac{9}{2} \cdot \frac{8}{3} = \frac{12}{1} = 12$

multiply by the whole number.
add the numerator.
denominator stays the same.

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

$\frac{3}{2} \cdot \frac{5}{3_1} = \frac{5}{2} = 2\frac{1}{2}$

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

$\frac{5}{1} \cdot \frac{8}{5} = \frac{8}{1} = 1\frac{3}{5}$

$\left(-\frac{13}{\cancel{6}_{1}}\right)\left(-\frac{\cancel{6}^{1}}{5}\right) = \frac{13}{5} = 2\frac{3}{5}$

Dimensional Analysis
include unit measurements

$$\frac{540 \text{ mi.}}{1 \text{ hr.}} \times 1\frac{1}{3} \text{ hr.}$$

$$\frac{\overset{180}{\cancel{540}} \text{ mi.}}{1 \cancel{\text{ hr.}}} \times \frac{4}{\cancel{3}_{1}} \cancel{\text{hr.}} = 720 \text{ mi.}$$