

7.1 Multiplying a Fraction and a Whole Number

Whole Number -

0, 1, 2, 3,

- No fractions
- No Decimals

$$7 \cdot \frac{1}{2} = \frac{1}{2} \cdot 7 = \frac{7}{2} = 3\frac{1}{2}$$

Process

$$a \cdot \frac{b}{c} = \frac{b}{c} \cdot a = \frac{a \cdot b}{c}$$

Product of whole number and numerator
denominator

$$4 \cancel{16} \cdot \frac{3}{4} = \frac{4 \cdot 3}{1} = 12$$

Simplify before you multiply

Don't do this

$615 \times \frac{3}{4}$ cannot reduce the whole number with the numerator

$$\frac{2}{3} \cdot x = 6 \quad \frac{2}{3} = \frac{6}{x}$$

$$\frac{2}{3} \cdot 9 = \frac{2 \cdot 3}{1} = 6$$

$$x = 9 \quad \frac{1}{3} \cdot 20 = 20 \text{ sec}$$

Estimate the Product

$\frac{1}{3}$ of 16

Compatible Numbers

$$\begin{array}{r} 5 \overline{)46} \\ \uparrow \end{array}$$

$$\frac{1}{3} \text{ of } 16$$

$$\uparrow \frac{1}{3} \text{ of } 15 = \frac{15}{3} = 5$$

Estimate

$\frac{7}{8}$ of 63

Start with 8
Change 63 to a close multiple of 8

$$\frac{7}{8} \cdot 64 = 56$$

7343 -344 2-36 even