36.)

	Fat	0.03
+	Protein	0.44
	Carbs	0.53
	Total	1.00

all of the calories
100 %
1.0

$0.44 = \frac{44}{100} = \frac{11}{25}$

$0.\overline{2467}$

50.)

$3\frac{1}{7} = 3.142857143$

≈ 3.143

$3\frac{10}{71} = 3.140845070$

≈ 3.141

$\pi = 3.14159265354\ldots$

≈ 3.142

3.141 3.142 3.143

a.) yes

$\frac{256}{81} = 3.160493827$

≈ 3.160

b.) Archimedes is closer

22.) 0.27 $\frac{27}{100}$ 0.60 $\frac{60}{100} = \frac{3}{5}$

3-3 Multiplying Rational Numbers

Rational Numbers

- repeating decimals
- fraction
- whole #s
- integers

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

Reduce!

Common factor 2

$\frac{1}{2} \cdot \frac{4}{10} = \frac{2}{10} = \frac{1}{5}$

- look for a common factor in a numerator and a denominator
- divide both numbers by that factor
- then multiply $\frac{n \cdot n}{d \cdot d}$

1B. $\frac{\cancel{5}^{1}}{\cancel{12}_{2}} \cdot \frac{\cancel{6}^{1}}{\cancel{10}_{2}} = \frac{1}{4}$

$$\frac{3^{1}}{4} \cdot -\frac{7}{9_{3}} = -\frac{7}{12}$$

$2\frac{1}{3} \cdot 2\frac{5}{7} =$

$\frac{7}{3} \cdot \frac{19}{7} = \frac{19}{3} = 6\frac{1}{3}$

2A.) $-\frac{\cancel{9}^{3}}{\cancel{12}_{4}} \cdot -\frac{\cancel{2}^{1}}{\cancel{3}_{1}} = \frac{3}{6} = \frac{1}{2}$

$$\frac{6}{9_3} \cdot \frac{-3}{11} - 1 - \frac{6}{33} - \frac{2}{11}$$

$3\frac{3}{8} \cdot 2\frac{1}{3}$

$\frac{27}{8} \cdot \frac{7}{3} = \frac{63}{8} = 7\frac{7}{8}$

3A.) $-1\frac{5}{6} \cdot 5\frac{1}{7}$

$\frac{11}{6} \cdot \frac{36}{7} = \frac{66}{7} = -9\frac{3}{7}$

3B

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

$\frac{5}{1} \cdot \frac{3}{8}$ $\frac{15}{8} = 1\frac{7}{8}$

3C.

$y =$

$-2\frac{2}{9} \cdot \frac{7}{10}$

$-\frac{20}{9} \cdot \frac{7}{10} = \frac{14}{9}$

$1\frac{5}{9}$