Mathematics 8
Section 5.10 – Comparing Rates

Being able to compare ratios plays an important role in your everyday life.

Many grocery items come in different sized packages. Being able to figure out which is the best buy can end up saving you a bunch of money.

Consider the following situation. Which is the best deal?

Option A
355 mL
$0.69 /can

Option B
710 mL
$1.15 /bottle

Option C
2L = 2000 mL.
$2.89 /bottle

* You need to break the cost down to a per unit rate. You can choose anything, but working with 1, 10, 100, 1000 is easier. We will use 100's.

Option A:

Has a volume of 355 mL for $0.69

$$\frac{355}{100} = 3.55 \text{ , so cost of a 100 mL } \frac{\$0.69}{3.55} = \boxed{\$0.19}$$

Option B:

has a volume 710 mL for $1.15

$$\frac{710}{100} = 7.1 \text{ , so cost of 100 mL } \frac{\$1.15}{7.1} = \boxed{\$0.16}$$

Option C:

has a volume of 2000 mL for $2.89

$$\frac{2000}{100} = 20 \text{ , so cost of } \frac{\$2.89}{20} = \boxed{\$0.14}$$
100 mL

Option C is the best buy.

Sometimes the calculations can be even easier than the one above.

In the situation above, each item contained a different amount of product.

If the amount of product is always the same, and your only option is the quantity to purchase, you proceed as below.

Package A

2 rolls

$0.99

Package B

6 rolls

$3.99

Package C

12 rolls

$6.99

Package A: Since 12 is a multiple of both 2 & 6 we can use 12 as our unit.

$$2 \text{ rolls } \$0.99$$
$$\times 6 \text{ to get to } 12.$$

$$\$0.99 \times 6 = \$5.94 / 12 \text{ rolls}$$

Package B:

$$6 \text{ rolls } \$3.99$$
$$\times 2 \text{ to get to } 12$$

$$\$3.99 \times 2 = \$7.98 / 12 \text{ rolls}$$

Package C:

$$12 \text{ rolls } \$6.99$$

Package A is the best buy!