***RATIOS & UNIT RATES***

**Ratio** – a ratio is a comparison between two quantities.

Example: There are 8 slices of pizza and you ate 2 slices.

2 (part) 8 (whole) 2 (part)

8 (whole) 2 (part) 6 (part)

* Ratios can compare different information…

1. Part 🡪 Part
2. Part 🡪 Whole
3. Whole 🡪 Part

* Ratios can be written or expressed in different formats…

1. 6

8

1. 6:8
2. 6 to 8

* Ratios can be simplified, just like fractions!!!

6

8 Divide both the numerator and denominator by 2, which is the *GCF* (greatest common factor).

6 ÷ 2 = 3

8 ÷ 2 = 4

6 3 So… 6:8 = 3:4

8 = 4 and… 6 to 8 = 3 to 4

**Rate** – a rate compares two different types of quantities. (quantities that have different units of measurement)

Example: Miles to Hours Miles:Hours

Dollars to Pounds Dollars:Pounds

Examples of “rates” in the real world.

* Speed (miles per hour)
* Heart Rate (beats per min)
* MPG (miles per gallon)
* PPP (price per pound)
* APR (annual percentage rate)

**Unit Rate** – a unit rate is a specific type of rate that has a denominator of one

Example: I can drive 350 miles in 2.5 hours.

*Unit Rate* = how many miles can I drive in 1 hour?

Miles 350 x

Hours 2.5 1

350 ÷ 2.5 = 140

x = 140 miles per hour (speed = mph)

Example: You can buy 13 DVDs for $74.50.

*Unit Rate* = what is the cost for 1 DVD?

Dollars $74.50 $

DVDs 13 1

74.50 ÷ 13 = 5.73

For $5.73 we can purchase 1 DVD.

Unit Rate = $5.73/dvd