Ratios

Definition of a Ratio

A ratio allows us to compare two quantities of the same nature in the same units.

A ratio of the number A to the number B can be written in 2 ways:

A : B or $\underline{A}$
$\quad\quad\quad$ B

We are comparing part A to part B

Ratio

A ratio can be written and reduced as a fraction, but it is not a fraction!

Ex.
1. 4:8
can be written as
2.

It can be reduced to:
1.
2.

Ratio

This can also be written as a decimal:

1. 3:4

2.

3.

Equivalent Ratios

Equivalent ratios, are exactly the same as equivalent fractions.

Can we think of any examples?

Ratio – Example 1

Example: It took Lucy an hour to drive to Ottawa, but it took Jean 50 minutes. What is the ratio of the time Lucy drove to the time Jean drove?

Ratio – Example 1

What if we wanted to compare the ratio of the time it took Jean to drive to Ottawa to the time Lucy took?

Ratio: Example 1

Now, let's compare both in decimal form:

Ratio : Example 1

So does the order make a difference?

Ratio: Example 2

During the soccer season, a team wins 30 games and loses 15. What is the ratio of the number of wins to the number of losses?

Ratio: Example 3

At a chocolate store, there are 20 oreo truffles and 25 coconut truffles. What is the ratio of the number of oreo truffles to the number of coconut truffles?

Ratio: Example 4

Is $\frac{3}{5}$ equivalent to $\frac{12}{20}$?

Ratio: Example 5

Find the missing value

7 : 9 = 21: x

Class work:

Write two equivalent ratios for each:

1. 15 : 20

2. 9: 3

3. 8 : 12

Find the missing values:

4. 1: 2: 3 = 2: 4: x

5. 5: x: 7 = 10 : 12 : 14

Write in a ratio in the 2 different ways:

1. 7 to 16
2. 17 people in a class of 25 have brown hair
3. In Canada 88 out of 100 people have skated
4. 3 quarters to 5 nickels
5. A hockey team wins 56 out of 80 games
6. Grant gets 25 correct on a 40 question exam
7. A rectangle is 20m long and 14m wide
8. 35 seconds to 6 minutes
9. The number of vowels to the number of consonants
10. The number of Territories to the number of Provinces
11. 8 cents to 8 dollars
12. 3 dimes to 4 quarters
13. 5 oreo cookies to 7 chocolate chip
14. 5 blue towels to 8 yellow towels
15. The number of boys to the number of girls in class today