

Two of the most practical things in mathematics are fractions and decimals. Whether you are aware of it or not, you use them in your daily life. You encounter it when you go shopping, ask for a medical prescription, split expenses, follow a recipe, pay for transportation, and so on.

In this reviewer, we are going to talk about everything you need to know about fractions and decimals including their definitions and other useful terminologies.

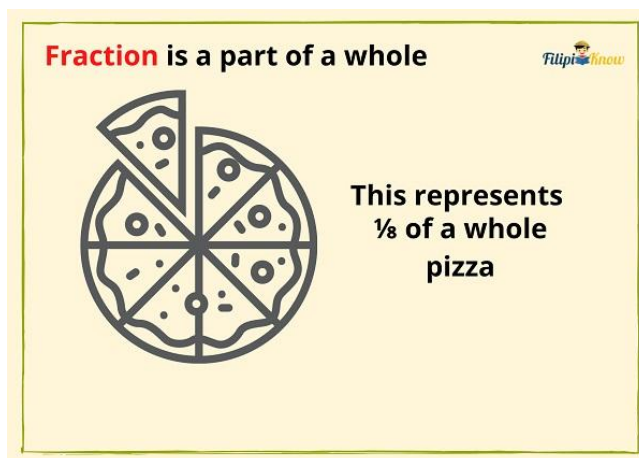
Part I: Fractions.

What is a fraction?

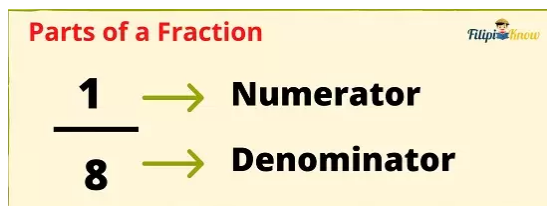
A fraction is a part or a section of a whole.

For instance, if you and your friends decide to buy a pizza for a movie marathon, you will cut the pizza into 8 slices. You will certainly take one slice from it. That one slice you took is $\frac{1}{8}$ of the pizza.

$\frac{1}{8}$ of the pizza is a fraction since it is a part of the whole (i.e., the entire pizza).



Parts of a Fraction.



1. Numerator.

A fraction consists of two parts - the numerator and the denominator.

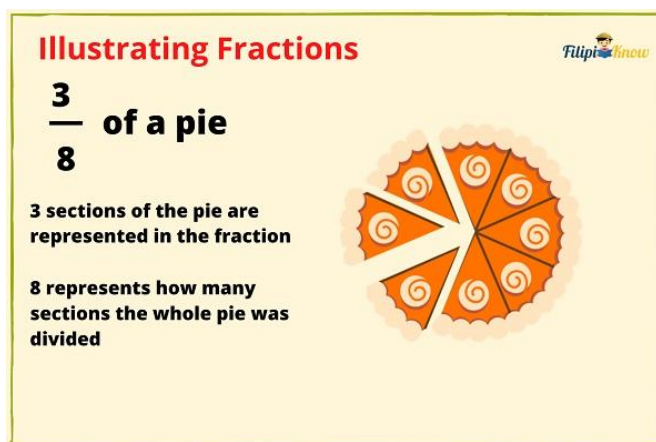
The numerator is the number you see in the upper part of the fraction. It tells you how many sections are represented in the fraction. For example, in $\frac{1}{8}$, 1 is the numerator. This means that 1 section of the whole is represented in the fraction.

2. Denominator.

On the other hand, the denominator is the number you see in the lower part of the fraction. It tells you how many sections the whole is divided into. For example, in $\frac{1}{8}$, 8 is the denominator. This means that the whole is divided into a total of 8 sections.

Illustrating Fractions.

Pies are great not only because they are delicious, but also because they can be used to represent fractions. Let's try to illustrate $\frac{3}{8}$ using a pie.



The three slices cut from the pie represent the numerator of the fraction which is 3. Meanwhile, the whole pie was divided into a total of 8 slices which represents the denominator of the fraction.

There are other ways to represent fractions aside from using a pie. *Did you know that your exam scores can illustrate a fraction?*

Suppose you have a 50-item exam and you answered 42 items correctly. Your score can be illustrated in the form of a fraction: $\frac{42}{50}$ where 42 represents the items of the exam you got correctly while 50 represents the total number of items of the exam.

Types of Fractions.

1. Proper Fractions.

A proper fraction is a fraction where the value of the numerator is less than the value of the denominator. For example, $\frac{5}{8}$ is a proper fraction since its numerator which is 5 is less than its denominator which is 8.

Other examples of proper fractions are $\frac{1}{3}$, $\frac{2}{5}$, $\frac{7}{9}$, $\frac{121}{321}$, and so on.

2. Improper Fractions.

An improper fraction is a fraction where the value of the numerator is greater than or equal to the value of the denominator. For example, $\frac{8}{5}$ is an improper fraction since its numerator 8 is greater than its denominator 5.

Similarly, $\frac{4}{4}$ is an improper fraction since its numerator is equal to the denominator (both are 4). Take note that if the numerator and the denominator have the same value, then that fraction is equal to 1. Therefore, $\frac{4}{4} = 1$.

In other words, when you get a perfect score from a ten-item exam, you actually have an improper fraction of $\frac{10}{10}$!

Other examples of improper fractions are $\frac{4}{3}$, $\frac{8}{5}$, $\frac{120}{51}$, $\frac{20}{20}$, and so on.

Mixed Number.

A mixed number is a combination of a whole number and a proper fraction. For example, $2\frac{3}{4}$ is a mixed number because it is a combination of a whole number (which is 2) and a proper fraction (which is $\frac{3}{4}$).

There is an interesting fact about improper fractions and mixed numbers. You can transform an improper fraction to a mixed number and vice-versa. This method is useful when performing some mathematical operations with fractions. Let's discuss how to convert an improper fraction to a mixed number below.

1. Converting an Improper Fraction to Mixed Number Form.

Here are the steps you need to follow so you can convert an improper fraction to a mixed number:

1. Divide the numerator by the denominator. To do this, put the numerator inside the division bracket while put the denominator outside the division bracket, then perform long division.
2. Designate the quotient as the whole number of the mixed number
3. Assign the remainder as the numerator of the proper fraction part of the mixed number.
4. Copy the denominator of the improper fraction and use it as the denominator of the mixed number.
5. Reduce the proper fraction part of the mixed number, if possible

Example 1: Convert $\frac{4}{3}$ to mixed number form.

CONVERT $\frac{4}{3}$ TO MIXED NUMBER FORM

Step 1 - Divide the numerator by the denominator (Put the numerator inside the division bracket while put the denominator outside the division bracket) then perform long division.

$$\frac{4}{3} \rightarrow 3 \overline{)4} \rightarrow \begin{array}{r} 1 \\ 3 \overline{)4} \\ \underline{-3} \\ 1 \end{array}$$

Step 2 - Put the quotient (the number above the division bracket) as the whole number of the Mixed Number

$$\begin{array}{r} 1 \\ 3 \overline{)4} \\ \underline{-3} \\ 1 \end{array} \rightarrow 1 \begin{array}{|c|} \hline \square \\ \hline \end{array}$$

Step 3 - Put the remainder as the numerator of the proper fraction part of the Mixed Number.

$$\begin{array}{r} 1 \\ 3 \overline{)4} \\ \underline{-3} \\ 1 \end{array} \rightarrow 1 \frac{1}{\square}$$

Step 4 - Copy the denominator of the Improper Fraction and use it as the denominator of the Mixed Number.

$$\begin{array}{r} 1 \\ 3 \overline{)4} \\ \underline{-3} \\ 1 \end{array} \rightarrow 1 \frac{1}{3}$$

Step 5 - Reduce the proper fraction part of the Mixed Number if possible

$$1 \frac{1}{3}$$

The Proper Fraction $\frac{1}{3}$ is already in lowest terms. Therefore, our final answer is $1 \frac{1}{3}$

If we can transform an improper fraction to its mixed number form, we can also perform the opposite.

2. Converting a Mixed Number to Improper Fraction.

Here are the steps on how to transform a mixed number into an improper fraction:

1. Multiply the denominator of the mixed number by the whole number part then add the product to the numerator. The resulting number is the numerator of the improper fraction.
2. Copy the denominator of the proper fraction of the mixed number and use it as the denominator of the improper fraction.
3. Reduce the obtained fraction to its lowest terms, if possible.

Example: Convert $2\frac{3}{5}$ to a mixed number.



CONVERT $2\frac{3}{5}$ TO IMPROPER FRACTION

Step 1 - Multiply the denominator of the Mixed Number by the whole number part then add the product to the numerator. The resulting number is the numerator of the improper fraction

$$2 \begin{array}{r} +3 \\ \times 5 \\ \hline \end{array} = \frac{13}{\square}$$

Step 2 - Copy the denominator of the proper fraction of the Mixed Number and use it as the denominator of the improper fraction

$$2\frac{3}{5} = \frac{13}{5}$$

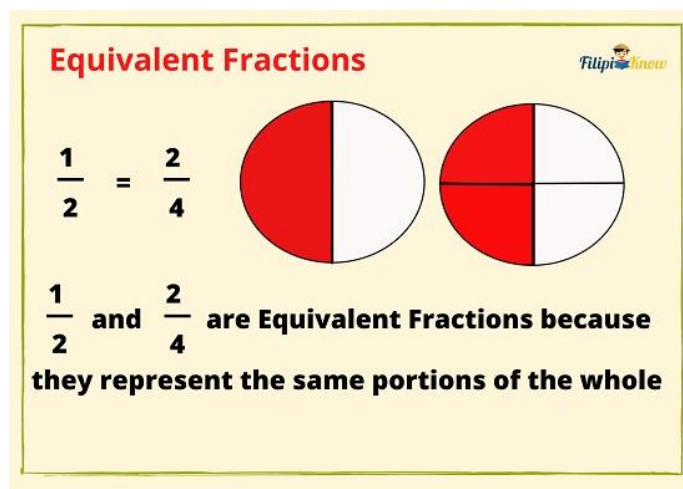
Step 3 - Reduce the obtained fraction to its lowest terms if possible.

$$\frac{13}{5} \text{ is already in lowest terms}$$

Therefore, $2\frac{3}{5} = \frac{13}{5}$

Equivalent Fractions.

Equivalent fractions are fractions that have equal value. These fractions represent the same portion of the whole. For example, $\frac{1}{2}$ is equal to $\frac{2}{4}$ since they represent the same portion of a whole.



How to Determine an Equivalent Fraction to a Given Fraction.

The easiest way to determine an equivalent fraction to a given fraction is to multiply the numerator and the denominator of the given fraction by the same number.

For example, if we want to find an equivalent fraction to $\frac{1}{2}$, we can multiply its numerator and denominator by the same number. If we multiply both the numerator and the denominator of $\frac{1}{2}$ by 2, we obtain an equivalent fraction to $\frac{1}{2}$ which is $\frac{2}{4}$.

Example: Find three equivalent fractions to $\frac{3}{5}$

To find the answers, let's multiply the numerator and the denominator of $\frac{3}{5}$ with the same numbers thrice.

$$\frac{3}{5} \times \frac{2}{2} = \frac{6}{10}$$

$$\frac{3}{5} \times \frac{3}{3} = \frac{9}{15}$$

$$3/5 \times 4/4 = 12/20$$

Therefore, $6/10$, $9/15$, and $12/20$ are equivalent fractions to $\frac{3}{5}$.

How to Determine if Two Fractions are Equivalent Fractions.

One method you can use to determine if two fractions are equivalent is by using the cross-multiplication method.

To perform the cross-multiplication method, follow these steps:

1. Multiply the numerator of the first fraction by the denominator of the second fraction.
2. Multiply the denominator of the first fraction by the numerator of the second fraction.
3. If the products you have obtained from Steps 1 and 2 are equal, then the fractions are equivalent. Otherwise, the fractions are not equivalent.

Let us try these steps in our next example.

Example: Are $\frac{1}{4}$ and $\frac{3}{12}$ equivalent fractions?

Use the cross-multiplication method:

1. *Multiply the numerator of the first fraction by the denominator of the second fraction.*

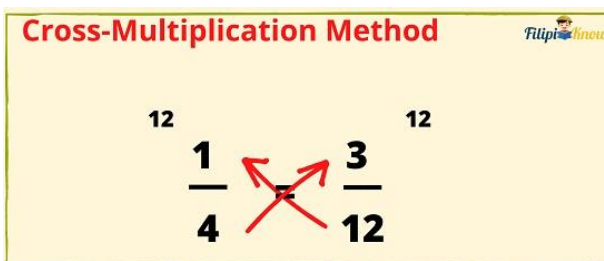
$$1 \times 12 = 12$$

2. *Multiply the denominator of the first fraction by the numerator of the second fraction.*

$$4 \times 3 = 12$$

3. *If the products you have obtained from Steps 1 and 2 are equal, then the fractions are equivalent.*

We have obtained 12 both from Step 1 and Step 2. Hence, $\frac{1}{4}$ and $\frac{3}{12}$ are equivalent fractions.



Fractions in Lowest Terms.

A fraction is in its lowest terms if the numerator and the denominator of a fraction have no common factor other than 1. In other words, the numerator and the denominator of the fraction are both prime numbers.

The lowest term of a fraction is also known as its “simplest form”.

For example, $\frac{2}{3}$ is a fraction in the lowest terms because its numerator and denominator have no common factor other than 1. Also, both 2 and 3 are prime numbers.

On the other hand, $\frac{15}{20}$ is not in the lowest terms because its numerator (which is 15) and its denominator (which is 20) have a common factor of 5.

How to Reduce a Fraction to Its Lowest Term.

Reducing or simplifying a fraction to its lowest term is the process of transforming a fraction to its simplest form.

For example, $\frac{15}{20}$ is a fraction that is not in its lowest term. We can transform $\frac{15}{20}$ into an equivalent fraction that is in the lowest term. The lowest term of $\frac{15}{20}$ is $\frac{3}{4}$. We will discuss in the next section how to reduce a fraction into its lowest terms.

It is important to note that the original fraction and its lowest term are equivalent fractions. Therefore, $\frac{15}{20}$ and its simplified form $\frac{3}{4}$, are equivalent fractions.

Finding the Lowest Terms of a Fraction using the Greatest Common Factor (GCF).

The most reliable way to transform a fraction into its lowest term is using the [Greatest Common Factor \(GCF\)](#) of the numerator and the denominator. To transform a given fraction to its lowest terms:

1. Determine the GCF of the numerator and the denominator.
2. Divide both the numerator and the denominator by the GCF, the resulting fraction is the fraction reduced into the lowest terms.

Example 1: What is $\frac{8}{10}$ in its lowest terms?

1. *Determine the GCF of the numerator and the denominator.*

Determine the GCF of 8 and 10. Using the [prime factorization method](#), the GCF of 8 and 10 is 2.

2. *Divide the numerator and the denominator by the GCF.*

$$\frac{8}{10} \div \frac{2}{2} = \frac{4}{5}$$

The resulting fraction is $\frac{4}{5}$. Hence, $\frac{4}{5}$ is the lowest term of $\frac{8}{10}$.

Example 2: Simplify $\frac{45}{225}$.

1. *Determine the GCF of the numerator and the denominator.*

Determine the GCF of 45 and 225. Using the prime factorization method, the GCF of 45 and 225 is 45.

2. *Divide the numerator and the denominator by the GCF.*

$$\frac{45}{225} \div \frac{45}{45} = \frac{1}{5}$$

The resulting fraction is $\frac{1}{5}$. Hence, $\frac{1}{5}$ is the lowest term of $\frac{45}{225}$.

Similar and Dissimilar Fractions.

Similar fractions are fractions with the same denominators. For example, $\frac{2}{3}$ and $\frac{1}{3}$ are similar fractions since their denominators are the same (which is 3).

Dissimilar fractions are fractions with unlike denominators. For example, $\frac{2}{5}$ and $\frac{1}{3}$ are dissimilar fractions since their denominators are different.

Dissimilar fractions can be transformed into equivalent similar fractions using the [Least Common Multiple](#), which we will discuss in the succeeding reviewer.

Part II: Decimals.

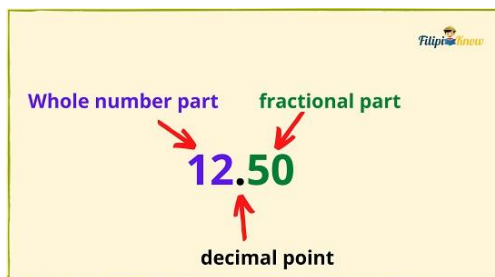
Just like fractions, decimals are also a practical tool in mathematics. We encounter them in money, length, weight, time, and so on. The most obvious characteristic of a decimal number is that it has a decimal point.

However, *what really is a decimal number?*

What are decimals?

Decimals are numbers that combine a whole number and a fraction together. The whole number part is separated from the fractional part through a decimal point (.).

The numbers on the left of the decimal point are the whole number while the numbers on the right of the decimal point are the decimal numbers that represent the fractional part.



Suppose you buy a pencil that costs PHP 12.50.

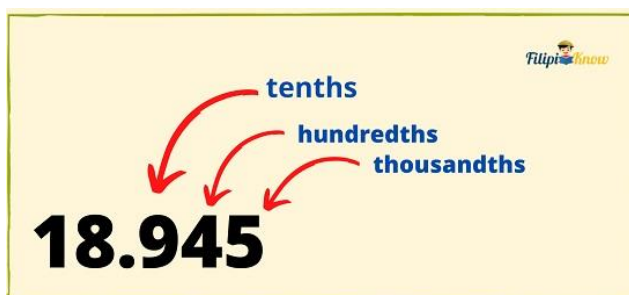
12.50 is an example of a decimal number where 12 is the whole number part while 50 is the fractional part.

Place Value of Decimal Numbers.

Just like whole numbers, decimal numbers also have corresponding place values. However, the world of decimal numbers is different from the world of [whole numbers](#).

Let's use the decimal number 18.945 as an example.

We know that 18 is the whole number part of the decimal number. We also know the corresponding place value of the digits of 18; 8 is in the ones digit while 1 is in the tens digit. However, once we step to the right of the decimal point, we will encounter a new system for the place values of the digits of the decimal number.



The first digit on the right of the decimal point is the digit in the tenths place. Hence, 9 is in tenth place. Its value is 0.9.

The second digit on the right of the decimal point is the digit in the hundredths place. Hence, 4 is in the hundredths place. Its value is 0.04

The third digit on the right of the decimal point is the digit in the thousandths place. Hence, 5 is in the thousandths place. Its value is 0.005.

As you move to the left of the decimal number, the place value of the digits becomes 10 times larger. Therefore, the tenths place is 10 times larger than the hundredths place, the hundredths place is ten times larger than the thousandths place, and so on.

Types of Decimal Numbers.

You will encounter a lot of decimal numbers in your study of [different branches of mathematics](#). However, you can only classify them into four types:

1. Terminating Decimals.

These are the decimal numbers where the digits of the fractional part are finite or have an end. This means that the digits after the decimal point are countable. Terminating decimals are also known as exact decimals.

Some examples of terminating decimals are 0.5, 0.82, 0.3113, -0.4531, and so on. Note that the numbers at the right of these decimal numbers are countable or finite.

2. Non-terminating Decimals.

These are the opposite of terminating decimals. The number of digits on the right of the decimal point is infinite or has no end. This means that the digits after the decimal point are uncountable.

Some examples of non-terminating decimals are 0.123533124464..., 0.23134823..., 0.5123..., and so on.

Recall that non-terminating decimal numbers are [irrational numbers](#) and we cannot express them as fractions with integers.

3. Terminating and Repeating (Recurring) Decimal Numbers.

These are terminating decimal numbers where the digits on the right of the decimal point are repeating but have an end. As long as the number of digits in the fractional part is countable, the decimal number is a terminating and repeating decimal number.

Examples are 0.4242, 0.152152152, 0.101101101, and so on.

4. Non-terminating and Repeating (Recurring) Decimal Numbers.

These are non-terminating decimal numbers where the digits on the right of the decimal point are repeating but have no end. As long as the number of digits in the fractional part is uncountable, the decimal number is a non-terminating and repeating decimal number.

Examples are 0.25252525..., 0.727272..., 0.818181..., 0.543254325432..., and so on.

How to Convert Fractions into Decimals.

If you have a half ($\frac{1}{2}$) of a peso, this also means you have 0.5 pesos. Therefore, $\frac{1}{2}$ is equivalent to 0.5. *However, how am I able to convert $\frac{1}{2}$ into 0.5? How did I convert a fraction into its decimal form?*

The easiest way to convert fractions into their decimal form is, of course, by using a calculator. However, knowing how to convert fractions into their decimal form manually gives you an edge during an examination where calculators are not allowed.

Let us discuss how to convert a proper fraction into its decimal form manually.

1. Converting a Proper Fraction to its Decimal Form.

Here are the steps to convert a proper fraction into its decimal form:

1. Divide the numerator by the denominator. Use the numerator as the dividend while use the denominator as the divisor.
2. Put a zero with a decimal point above the division bracket then add a decimal point and a zero after the number inside the division bracket.
3. Apply long division.

Example 1: Convert $\frac{1}{2}$ to its decimal form.

Step 1: Divide the numerator by the denominator. Use the numerator as the dividend while use the denominator as the divisor.

We put 1 inside the division bracket since it is the numerator of the fraction. Meanwhile, we put 2 outside the division bracket since it is the denominator of the fraction.

Convert $\frac{1}{2}$ to its Decimal Form

Step 1 - Divide the numerator by the denominator

$$\frac{1}{2} \rightarrow 2 \overline{)1}$$

**Put the numerator inside the division bracket.
Meanwhile, put the denominator outside the division bracket**

Step 2: Put a zero with a decimal point above the division bracket then add a decimal point and a zero after the number inside the division bracket.

Convert $\frac{1}{2}$ to its Decimal Form

Step 2 - Put a zero with a decimal point above the division bracket then add a decimal point and a zero after the number inside the division bracket.

$$2 \overline{)1.0}$$

0. ←
←

As we add a decimal point and a zero to the number inside the division bracket, 1 becomes 10. Now, we can divide 10 by 2 and proceed with the normal division process.

Step 3: Apply long division.

We may now perform division with whole numbers:

Convert $\frac{1}{2}$ to its Decimal Form

Step 3 - Apply long division

$$\begin{array}{r} 0.5 \\ 2 \overline{) 1.0} \\ \underline{- 10} \\ 0 \end{array}$$

Therefore, the decimal form of $\frac{1}{2}$ is 0.5

Example 2: Convert $\frac{1}{3}$ to its decimal form.

Step 1: Divide the numerator by the denominator. Use the numerator as the dividend while use the denominator as the divisor.

We put 1 inside the division bracket since it is the numerator of the fraction. Meanwhile, we put 3 outside the division bracket since it is the denominator of the fraction.

Convert $\frac{1}{3}$ to its Decimal Form

Step 1 - Divide the numerator by the denominator

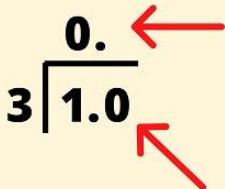
$$\frac{1}{3} \rightarrow 3 \overline{) 1}$$

Put the numerator inside the division bracket. Meanwhile, put the denominator outside the division bracket

Step 2: Put a zero with a decimal point above the division bracket then add a decimal point and a zero after the number inside the division bracket.

Convert $1/3$ to its Decimal Form

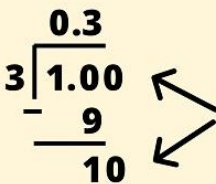
Step 2 - Put a zero with a decimal point above the division bracket then add a decimal point and a zero after the number inside the division bracket



Step 3: Apply long division.

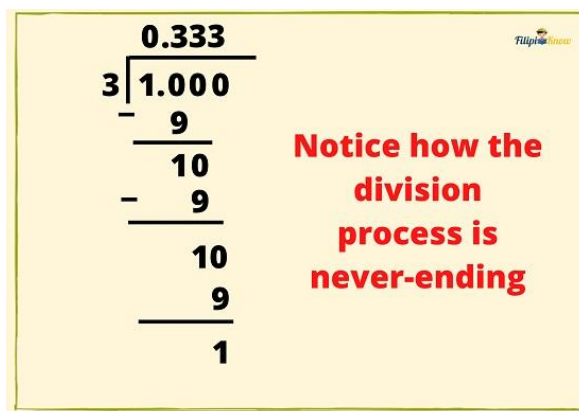
Convert $1/3$ to its Decimal Form

Step 3 - Apply long division



if the remainder is not 0 and smaller than the divisor, just add a zero to the original number and to the remainder so that you can continue the division process

Continue adding 0 to the remainder in case it is smaller than the divisor so that you can continue the division process.



0.333

$$\begin{array}{r} 3 \overline{) 1.000} \\ \underline{- 9} \\ 10 \\ \underline{- 9} \\ 10 \\ \underline{- 9} \\ 1 \end{array}$$

Notice how the division process is never-ending

Since the division process is never-ending and we will never arrive at a remainder of 0, then the decimal form of the fraction is a non-terminating decimal. Furthermore, since the digits of the decimal are repeating or recurring, then it means that the decimal number we obtained is a non-terminating and repeating decimal.

Therefore, the decimal form of $\frac{1}{3}$ is 0.333...

How about if the given fraction is an improper fraction where the numerator is greater than the denominator? Let's discuss the steps below.

2. Converting an Improper Fraction to its Decimal Form.

Here are the steps to convert an improper fraction into its decimal form:

1. Divide the numerator by the denominator. Use the numerator as the dividend while use the denominator as the divisor.
2. Divide the whole numbers.
3. If there's a remainder, add a decimal point and a zero to the right of the number inside the division bracket and add a zero also to the right of the remainder.
4. Apply long division and put a decimal point to the final answer.

Example: Convert $\frac{8}{5}$ to its decimal form.

1. *Divide the numerator by the denominator. Use the numerator as the dividend while use the denominator as the divisor.*

Convert $\frac{8}{5}$ to its Decimal Form

Step 1 - Divide the numerator by the denominator

$$\frac{8}{5} \rightarrow 5 \overline{)8}$$

**Put the numerator inside the division bracket.
Meanwhile, put the denominator outside the
division bracket**

2. Divide the whole numbers.

Convert $\frac{8}{5}$ to its Decimal Form

Step 2 - Divide the whole numbers

$$\begin{array}{r} 1 \\ 5 \overline{)8} \\ -5 \\ \hline 3 \end{array}$$

3. If there's a remainder, add a decimal point and a zero to the right of the number inside the division bracket and add a zero also to the right of the remainder.

Convert $\frac{8}{5}$ to its Decimal Form

Step 3 - If there's a remainder, add a decimal point and a zero to the right of the number inside the division bracket and add a zero also to the right of the remainder.

$$\begin{array}{r} 1 \\ 5 \overline{) 8.0} \\ \underline{- 5} \\ 30 \end{array}$$

4. Apply long division and put a decimal point to the final answer.

Convert $\frac{8}{5}$ to its Decimal Form

Step 4 - Apply long division and put a decimal point to the final answer

$$\begin{array}{r} 1.6 \\ 5 \overline{) 8.0} \\ \underline{- 5} \\ 30 \\ \underline{- 30} \\ 0 \end{array}$$

3. Converting a Mixed Number to its Decimal Form.

There are only two steps you must keep in your mind so you will be able to convert a mixed number to its decimal form:

1. Use the whole number part of the mixed number as the whole number part of the decimal form

2. Convert the proper fraction part of the mixed number into its decimal form. The obtained result is the fractional part of the decimal form.

Example: Convert $2\frac{2}{5}$ to its decimal form.

1. *Use the whole number part of the mixed number as the whole number part of the decimal form.*

The whole number part in $2\frac{2}{5}$ is 2. Therefore, this is also the whole number part of its decimal form.

2. *Convert the proper fraction part of the mixed number into its decimal form. The obtained result is the fractional part of the decimal form.*

Using the steps on converting a proper fraction into its decimal form (you can review the steps in the section above), $\frac{2}{5}$ is equal to 0.4.

Therefore, the decimal form of $2\frac{2}{5}$ is 2.4

How to Convert Decimals into Fractions.

If we can convert fractions into decimals, of course, we can also perform the opposite. We can convert a decimal into a fraction form.

However, take note that not all decimals can be converted into fractions. Again, non-terminating decimals are irrational numbers which mean they cannot be expressed as fractions.

Let's now proceed to the steps on how to convert decimals into fractions:

1. Use the numbers on the right of the decimal point as the numerator of the fraction. Do not write the zeros that appear immediately after the decimal point and before the nonzero digit.
2. If there is one digit on the right of the decimal point, use 10 as the denominator. If there are two digits on the right of the decimal point, use 100 as the denominator. If there are three digits on the right of the decimal point, use 1000 as the denominator and so on.
3. Reduce the fraction you have obtained from Step 1 and Step 2 into its lowest terms.

Example 1: Convert 0.2 to its fraction form.

1. *Use the numbers on the right of the decimal point as the numerator of the fraction. Do not write the zeros that appear immediately after the decimal point and before the nonzero digit.*

The number on the right of the decimal point is 2. Therefore, the numerator of the fraction form is 2.

2. *If there is one digit on the right of the decimal point, use 10 as the denominator. If there are two digits on the right of the decimal point, use 100 as the denominator. If there are three digits on the right of the decimal point, use 1000 as the denominator and so on.*

Since there's only one digit on the right of the decimal point (which is 2), we will use 10 as the denominator. This means that we have $\frac{2}{10}$.

3. *Reduce the fraction you have obtained from Step 1 and Step 2 into its lowest terms.*

The Greatest Common Factor (GCF) of 2 and 10 is 2. Dividing both the numerator and the denominator of $\frac{2}{10}$ by 2:

$$\frac{2}{10} \div \frac{2}{2} = \frac{1}{5}$$

Therefore, the fraction form of 0.2 is $\frac{1}{5}$

Example 2: Convert 0.008 to fraction.

1. *Use the numbers on the right of the decimal point as the numerator of the fraction. Do not write the zeros that appear immediately after the decimal point and before the nonzero digit.*

The number on the right of the decimal point is 008. However, we will not consider those numbers on the left of 8 because they immediately appear after the decimal point and before the nonzero digit. This means that the numerator of our fraction is 8.

2. *If there is one digit on the right of the decimal point, use 10 as the denominator. If there are two digits on the right of the decimal point, use 100 as the denominator. If there are three digits on the right of the decimal point, use 1000 as the denominator and so on.*

There are three digits on the right of the decimal point (i.e., 008). Hence, we will use 1000 as the denominator. This means we have $\frac{8}{1000}$.

3. *Reduce the fraction you have obtained from Step 1 and Step 2 into its lowest terms.*

The Greatest Common Factor (GCF) of 8 and 1000 is 8. Dividing both the numerator and the denominator of $\frac{8}{1000}$ by 8:

$$\frac{8}{1000} \div \frac{8}{8} = \frac{1}{125}$$

Therefore, 0.008 is equal to $\frac{1}{125}$