

Institute for Christian Teaching  
Education Department of Seventh-Day Adventists

**Better Understanding of the Bible through  
Mathematical Illustrations**

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## **Better Understanding of the Bible through Mathematical Illustrations**

**-In the Mathematics Class of Middle and High School-**

### **I. Introduction**

Sometimes young people whose understanding is still immature have difficulty of comprehending the briefly expressed words of the Bible. It was the same with me when I reflect my teenager years. For example, "He who abides in me, and I in him"(John 15:5) makes a question, how is it possible that two individuals can be within each other, and same question on Trinity, but I think the Set Theory of the relationship of equality will help understanding of it. Even though the verse "I am the vine, ye are the branches: He that abideth in me, and I in him, the same bringeth forth much fruit" is not difficult to understand, this would become more clear when it is explained with several relationships in mathematics. Understanding of eternal God and eternal heaven can be helped with mathematics' concept of infinity. Also, the existence of higher dimensional world above this present world can be explained through the definition of differential.

By solving an equation using graphs, we could teach students the fact that all the problems in life could be solved by meeting Jesus. Also, by talking about the definitions of dimensions in the world of real numbers and complex numbers, we could talk about the difference between living in this world and heaven, and the difference between living with Jesus and without Jesus. When teaching many different kinds of conversions, we could also talk about the conversion of our characters, and furthermore, about the Incarnation of Jesus.

Because mathematics is a science that trains man to be rational and logical, and to think reasonably, it can help understanding of the Bible.

## II. Mathematical Illustrations

### 1-1. "He who abides in me, and I in him" and the Set Theory of the relationship of equality

When I was young I once asked a pastor how two individuals can be within each other as I read the verse, "He who abides in me, and I in him"(John 15:5). The pastor explained this way. "It's like when you put sponge in water, water goes into sponge and sponge goes in water." He was right, but it didn't give me complete understanding of that Bible verse. This verse is basis for righteousness by faith and the most important comment for sanctification. Therefore it is really important to explain this verse well to students.

Set Theory in the modern mathematics is a basic and starting point to develop all mathematical theories. Therefore we can see most Math books' Chapter One deal with Set Theory. Set is a "group of individuals satisfied by the same condition", and the individuals are elements of Set. For Set A and B, if arbitrary element of A is in B and arbitrary element of B is in A, then it defines Set A and B are the same. That is, when "if a A, then a B" and "if a B, then a A", then  $A=B$ . And arbitrary element a of A becomes element of B, then B includes A, and when B includes A, A includes B, it defines  $A=B$ . Expressed by symbol; when "if a A, then a B", then  $A \subset B$ , and when  $A \subset B$ ,  $B \subset A$ , then  $A=B$ . This is in same logic with the verse John 15:5, "He who abides in me, and I in him".

How is Christ in us? With the verse John 15:7 "My words abide in you", through His words, the Bible, Christ is abiding in us. And how can we be in Christ? On John 15:10 He says "If ye keep my commandments, ye shall abide in my love".

Therefore when the words of God work in us and change us to show Christ's love, that is, when the same elements would be found in Jesus and in us, we would be one with Jesus. This is indeed mathematical comprehension of righteousness by faith.

### 1-2. Trinity and the Set Theory of the relationship of equality

It seems that it is not easy for our students to understand the term of Trinity. The word Trinity, which was made by theologians, cannot be found anywhere in the Bible, makes students to doubt. John 17:3 says "the only true God, and Jesus Christ, whom thou hast sent", and John 17:11 comments "that they may be one, as we are". What these verses are saying is that the only true God and Jesus Christ whom God has sent are two, but one. Adding the Holy Spirit to this view is called Trinity. So the young students are inevitable

to have question, "How can three be one?"

It is usually explained that the characters of the three persons of the Godhead are the same. This explanation is right, but the term of character wouldn't be easy word for the young students. So I think the Set Theory of equality relationship can again help them better understanding. For the three Sets of A, B, C, if arbitrary element a of A belongs to B, C, and if arbitrary element of B belongs to A, C, and if arbitrary element of C belongs to A, B, then the three Sets of A, B, C are the same. This will be the same with the statement that the three persons of the Godhead are one because all of the characters in them are the same. Jesus said on John 14:10,11, "Do you not believe that I am in the Father, and the Father in me? The words that I speak to you I do not speak on My own authority: but the Father who dwells in me, he does the works. Believe me that I am in the Father, and the Father in me: or else believe me for the sake of works themselves."

## **2. □Unless it abides in the Vine□and Several Mathematical Relationships**

The second half of John 15:5 says "He who abides in Me, and I in him, bears much fruit.' That is, the linking relationship between Jesus and us leads our lives into sanctified life. In mathematics, the relationship between two variables often emerge. These are the examples; the relationship of proportion; the correlation in statistics, especially positive correlation; and most importantly, the relationship between the independent variable and the dependent variable, which is called functional relation.

### **2-1. Proportion and the relationship with Jesus**

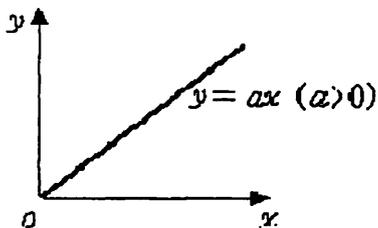
There are direct proportion and inverse proportion in the proportional relationship. For direct proportion, when one variable increases, the other variable also increases in regular rate; however, in inverse proportion, if one variable increases, then the other variable decreases. We can use proportional relationship to teach the relationship between Jesus and us. If we keep the direct proportional relationship with Jesus and receive more love from him, and if we're firmly connected to Jesus who is the vine, then our features will be more like Jesus, and we, as branches, will bear much fruits.

On the other hand, if we have inverse proportional relationship with Jesus, that is, if we keep ourselves farther from Him (not reading the Bible or neglecting praying), and if we are not connected to the vine (John 15:4), then we will become less like Jesus and will not be able to bear fruits (John 15:4). If these were put into expressions, the direct proportion would be  $y=ax$  ( $x$  is the love of Jesus,  $y$  is our feature,  $a$  is constant), and the inverse proportion would be  $y=\frac{a}{x}$  over  $x$

( $x$  is the distance between us and Jesus,  $y$  is our feature,  $a$  is constant). For example, if  $x$  is connected status to Jesus and  $y$  is our sinful feature, then we could say that as the feature of Jesus grows bigger, our worthless feature gets smaller.

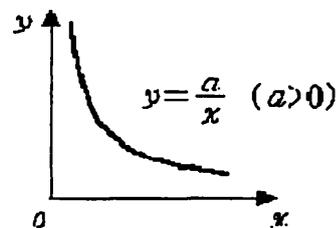
If these were put in a graphics, it would be like this:

**Direct proportion relationship**



$x$  : The Love of Jesus  
 $y$  : Our Feature  
 $a$  : Constant

**Inverse proportional relationship**

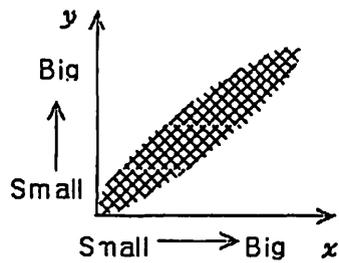


$x$  : The distance between us and Jesus  
 $y$  : Our Feature  
 $a$  : Constant

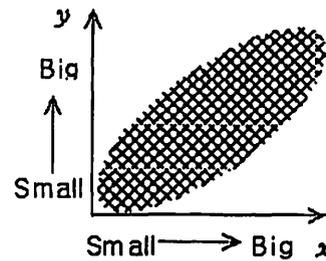
## 2-2. Correlation and the Relationship with Jesus

The correlation in statistics can be applied like proportional relations. Between the two related variables, if one variable increases or decreases depending on the other variable, it is said that there is correlation between these two variables. Between two variables  $x$  and  $y$ , if  $y$  increases as  $x$  increases, it is called positive correlation. If  $y$  decreases as  $x$  increases, it is called negative correlation. If it is neither increases nor decrease, it is said that there is no correlation. The graph with coordinating dot  $(x, y)$  that shows the relationship between the variables  $x$  and  $y$  is called correlogram. Here are socorrelograms that represent correlations.

## ① Positive correlation



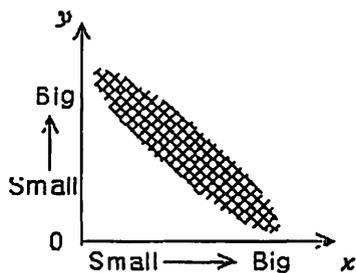
(Strong positive correlation)

 $x$ : Love of Jesus

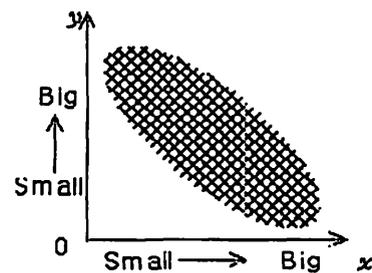
(Weak positive correlation)

 $y$ : Our Changed features

## ② Negative Correlation



(Strong negative correlation)



(Weak negative correlation)

i)  $x$ : Distance from Jesus (Neglecting reading the Bible and praying)

$y$ : Measurement of positive change in our features

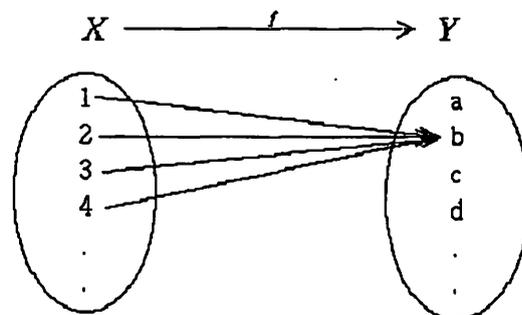
ii)  $x$ : Love of Jesus

$y$ : Our sinful feature

"Peter saith unto him, Thou shalt never wash my feet. Jesus answered him, If I wash thee not, thou hast no part with me" (John 13:8). We must adhere to the vine, and have correlation that our feet are washed by Jesus everyday. And this has to be a strong positive correlation!

### 2-3. Function of constance and the relationship with Jesus

For two sets,  $X, Y$ , when each element in  $Y$  corresponds to each element in  $X$ , this confrontation is called the function of  $X$  to  $Y$ , and is expressed as  $f: X \rightarrow Y$ , or  $X \xrightarrow{f} Y$ . Also by function  $f$ , if element  $y$  in  $Y$  corresponds to the element  $x$  in  $X$ , this confrontation is expressed as  $f: x \rightarrow y$ ,  $x \xrightarrow{f} y$ ,  $y = f(x)$ , and  $y$  is called the image (function value) of  $x$  by  $f$ . There are many kinds of function by different confrontation relations. Function of correspond to one element in  $Y$ . When we truly form a honest relationship with Jesus, then our features, thoughts, words, behavior will growing into correlate with those of the features of Jesus.



$f$ : Relationship with Jesus

1: Thoughts, 2: Words, 3: Behaviors, 4: Expression, etc.

a: Reputation, b: Feature of Jesus, c: Money, d: Power, etc.

"And after a while those who stood by came to him and said to Peter, Surely thou also are one of them, because your speech betrays you."(Matt 26:73).

"But you are a chosen generation, a royal priesthood, a holy nation, His own special people; that you may proclaim the \*praises of Him who hath called you out of darkness into his marvellous light" (1Pet 2:9).

"You are manifestly an epistle of Christ, ministered by us" (2Cor 3:3).

Just like these verses, the relationship that we have with Jesus as a chosen generation and His own special people bring out the beautiful virtue of Jesus in our daily lives including our spoken words.

All the example above shows the relationship that if one variable changes, the other variable also changes, whatever relations those two variables are in. Therefore, we can teach students these

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relations, we could also teach with the fact that if we keep continuous relationship with Jesus with faith, then we can not help being changed naturally into new persons.

### **3. The Concept of Infinity and Eternal God, and Eternal Heaven**

High school mathematics define infinity by 「immeasurably growing state」. Which means, infinity is unimaginably big thing; however, it doesn't refer to numbers but to the state. Then what is eternity? Is it endless time? Where is time, then? Would time disappear if all the watches are gone? These are some questions that students could ask, and for those of them who think of eternity as endless time might ask 'No matter how beautiful and happy Heaven is, wouldn't it get boring at some point if it lasts endlessly?' Isn't it true that the limited and shortened time we are living right now actually came after the Fall? Therefore, I think it would be helpful

if eternity is explained as a concept of state, just like a concept of infinity.

When Moses asked God what His name was in Ex 3:13, God responded by saying, "I am that I am", which means that He is the existence itself. In other words, He is the source (origin) of existence. Since the word "am" in the verse is an intransitive verb in present tense that represents existence, we could say that God is always in the present. Therefore, God can be "the same yesterday, today, and forever" (Heb. 13:8), because existence is always the concept of presence.

Because God is always in the present, He is eternal; Because Heaven is always in the state of joyous present, it can never be a boring place. The concept of eternity is always in the present that will help students with better understanding of it. The verse, But, beloved, be not ignorant of this one thing, that one day is with the Lord as a thousand years, and a thousand years as one day" (2Pet 3:8) may be understood in the same vein.

#### 4. The World Above Human World and the Differential

In high school mathematics,  $x^n$  can be an expression that represents *n dimension*. If the concept of limitation is used in the expression and *n* grows endlessly, then it becomes infinite dimension. Human beings can not comprehend the concept of Infinity, because man became limited beings by committing sin. However, if differential keeps being done even if the degree is incredibly high, then the degree becomes lower so that it becomes calculable and understandable dimension for human beings. By applying the concept of integral calculus, which is converse of differential, we realize that it is theoretically possible to calculate the world above the fourth dimension we live in.

"Yes, while I was speaking in prayer, the man Gabriel, whom I had seen in the vision at the beginning, being caused to fly swiftly, reached me about the time of the evening offering" (Dan 9:21).

"And war broke out in heaven: Michael and his angels fought against the dragon; and the dragon fought and his angels fought, but they did not prevail, nor was a place found for them in heaven any longer. So the great dragon was cast out, that serpent of old, called the Devil, and Satan, who deceives the whole world: he was cast out to the earth, and his angels were cast out with him" (Rev 12:7-9).

Then, the same day at evening, being the first day of the week, when the doors were shut where the disciples were assembled for fear of the Jews, Jesus came and stood in the midst, and said to them, Peace be with you. □ (John 20:19)

These verses mentioned that the angel Gabriel who rapidly flew down to Earth to deliver the answer of Daniel's prayer; Heaven where the war occurred between Michael and Satan; and Jesus who manifested in the closed room after His resurrection. All these verses show the fact that invisible and higher dimensional world actually exists. It teaches us that there actually is a world and beings that transcend space and time. The story of the resurrected Jesus shows the features of Adam and Eve before the Fall, and our appearance after the salvation. As we teach this reality, we can apply the concept of differential.

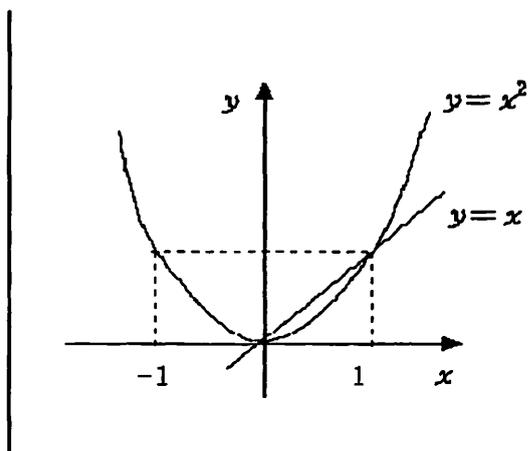
### 5. Solving an Equation and Meeting with Jesus

For example, an equality  $x^2 = x$ , that can both be true or false according to the value of  $x$ , is called the equation of  $x$ . And  $x$  is called the unknown of that equation. Also, the value of the unknown which makes the equation true is called the root of the equation. In other words,  $x=1$  is the root of the equation  $2x+1=3x$

On the other hand, finding the root of the equation is called "solving the equation."

Although there can be a couple of different ways to solve many equations and find the root, the most usual way would be to use the character of equality or the rule of mathematical chain calculation. However, when teaching equations, we can also teach that the root could be found by importing the concept of function and finding the value of  $x$  which makes the two functions equal. In other words, the coordinate(value) of the intersection of two graphs of two functions is the root of the  $x$  equation.

In concrete terms, when thinking of an equation  $x^2 = x$  as two functions  $y=x^2$  and  $y=x$ ,  $x$  makes the value of two functions  $y=x^2$  and  $y=x$  which makes the equation  $x^2 = x$  true. This can be explained with the graph; the intersection of two functions  $y=x^2$  and  $y=x$

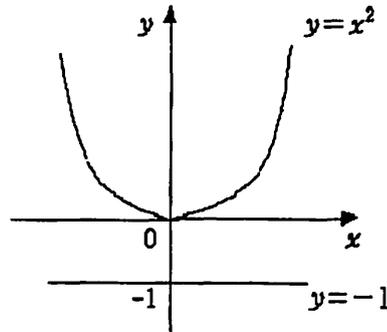


On this graph, the coordinate that the graphs of two functions intersect

is  $(0,0)$ ,  $(1,1)$ , and when the value of  $x$  is 0 and 1, the value of two functions also become the same as 0 and 1; therefore,  $x=0$ ,  $x=1$  can be the root of the equation  $x^2 = x$ .

On the other hand, if the graphs of two functions do not intersect, the root of the equation can not be found. This is true at

least in the world of real numbers. For example, equation  $x^2+1=0$ , is  $x^2=-1$ . If this is shown as two functions, it becomes  $y=x^2$ ,  $y=-1$ , and the graph looks like following:



As you can see on this graph, the graphs of two functions do not meet, and therefore, the value  $x$  which makes two functions the same does not exist. Therefore, the root of the equation  $x^2+1=0$  can not be found in the world of real numbers, and the equation can not be solved.

While teaching these facts, we can also teach the importance of meeting, especially the importance of the meeting with God. All those troubles and misunderstanding between people could be solved when the point of sympathy is found by meeting and talking, just like the way the equation is solved. However, if people dislike and refuse to meet and talk, the problems between them can not be solved, just like the equation that cannot be solved.

Our God is a very sociable God. God who enjoys and implores meeting. "Then the man and his wife heard the sound of the Lord God as he was walking in the garden in the cool of the day, and they hid from the Lord God among the trees of the garden. But the Lord God called to the man, 'Where are you?'"(Gen 3:8,9). As you can see in this verse, just like before man sinned, God still was walking in the garden and came to see Adam and Eve.

When sending angels to destroy Sodom and Gomorrah, God personally came to Abraham, and right then, at the place where He met Abraham, God promised the son, Isaac, to the hopeless old man Abraham. "When the Lord had finished speaking with Abraham, He left, and Abraham returned home."(Gen 18:33). Our God who enjoys to meet man this much, says, "Then have them make a sanctuary for me, and I will dwell among them"(Ex

25:8), and decided to stay with man. When this God, became a man and came to this earth, He became Immanuel. "The virgin will be with child and will give birth to a son, and they will call him Immanuel-which means, 'God with us'"(Matt 1:23).

God who wants to meet man, wants to meet us even today. "Be silent before me, you islands! Let the nations renew their strength! Let them come forward and speak; let us meet together at the place of judgment."(Isa 41:1). "Come now, let us reason together, says the Lord. Though your sins are like scarlet, they shall be as white as snow; though they are red as crimson, they shall be like wool"(Isa 1:18).

In these two verses, God asks us to meet Him and talk with Him. We have to teach the students the fact that if we meet God, the problem of sin-which is a lot harder than any complex equations, and never solvable for man-can be easily solved.

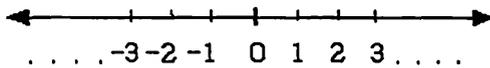
## 6. Dimensional Relationships and Heaven.

An expression that represents the dimensional relationship between two numbers or two expressions, using the sign of inequality  $<, >, \leq, \geq$ , is called an inequality. However, the comparison and giving definition of big and small is possible only in the world of real numbers in math. The real number is defined like this: It is real number when squared, the number that is bigger than 0, or the same with 0. All the real numbers and the point on the straight line correspond to each other, the straight line that corresponds the point on the straight line and the real number is called "perpendicular line".

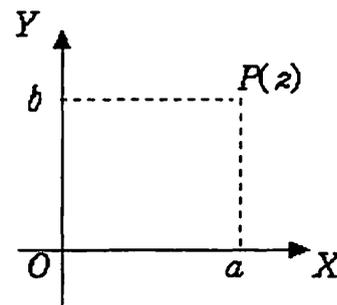
The number that corresponds to the right side of the perpendicular line is bigger than the number that corresponds to the left side of the perpendicular line. One of the fundamental characters of dimensions of the real numbers is, that only one of these materializes to a discretionary number  $a$

$a > 0, a = 0, a < 0$  In other words, if there are two or more numbers, one must be bigger than the other, or two must be equal in the world of the real numbers. However, if we broaden the world of numbers, let us think of a new number which becomes -1 when squared, and call this a letter  $i$ . In other words, if we define  $i^2 = -1$ , then  $i$  is called imaginary number unit. If  $a, b$  is the real number, the number of  $a+bi$  is called complex number,  $a$  is called real number area, and  $b$  is called imaginary number area. Also, the complex number  $b \neq 0$  that is  $a+bi$  is called imaginary number, and the complex number  $a=0, b \neq 0$  that is  $bi$  is called pure imaginary number. In other words, the complex number includes both real numbers and imaginary numbers. Since the complex number world includes both real and imaginary numbers, it is impossible to show

as points on the straight line, just like the real numbers. Therefore, just like corresponding a real number to the point on the straight line, we could correspond the complex number to the point on the plane of coordinates. The discretionary complex numbers  $z=a+bi$  could be corresponded one to one to the points  $P(a,b)$  on the plane of coordinates. On the contrary, the discretionary points  $P(a,b)$  on the plane of coordinates could be corresponded one to one to the discretionary complex numbers  $z=a+bi$ . Therefore, between the set of all the complex numbers and the set of all the points on the plane of coordinates, there is a one to one correspondence. The coordinate plane that each point represent is called complex plane, and the point  $P$  which represents the complex number  $z=a+bi$  is shown as  $P(z)$  or  $P(a+bi)$ . Also, an axis of  $x$  is called axis of real numbers, and axis of  $y$  is called the axis of imaginary numbers. When the perpendicular line and the complex plane is drawn, it is like following;



Perpendicular line



The complex plane

Since the world of real numbers can be represented on the straight line, and there is right, left, up and down to compare, we could always tell that two or more real numbers are bigger, smaller, or the same. However, since the world of complex number is represented on the plane, the dimensional relationship of two or more complex numbers can not be defined. In other words, comparison is impossible in the world of complex numbers.

It means that if we lift our thoughts just one higher level, from single line point of view(one dimensional) to the planar point of view(second dimensional), there is no need to compare anything. All the unhappiness and tragedy came from the comparison.

"You said in your heart, 'I will ascend to heaven; I will raise my throne above the stars of God; I will sit enthroned on the mount of assembly, on the utmost heights of the sacred mountain. I will ascend above the tops of the clouds; I will make myself like the Most

High."(Isa 14:13,14). Before the creation of world, Satan was thinking extremely low, one dimensional thoughts-wanting to be higher than the stars of God; wanting to be the Most High-in the world of infinite dimension, which is even a lot higher than two-dimensional (planar)world that dimensional relationship cannot be defined. In result of that, he became "a morning star, son of the dawn who has fallen from heaven, have been cast down to the earth"(Isa 14:12).

However, Satan did not stop there; instead, he caused the unhappiness on the all mankind today by putting his one-dimensional thoughts into Adam and Eve, the ancestor of mankind. "...when you eat of it your eyes will be opened, and you will be like God..."(Gen 3:5).

While Jesus was on the Earth, His disciples who did not comprehend His teaching, would keep struggling with the extremely one-dimensional issue-"in the Heaven that Jesus will build, who will be higher?"- whenever they had a chance. For this argument, Jesus gave the extremely high dimensional answer, which man's thought in this one-dimensional world could never understand. "At that time the disciples came to Jesus and asked, 'Who is the greatest in the kingdom of heaven?' He called a little child and had him stand among them. And He said: 'I tell you the truth, unless you change and become like little children, you will never enter the kingdom of heaven. Therefore, whoever humbles himself like this child is the greatest in the kingdom of heaven.'"(Matt 18:1-4)

There is the verse that says the same thing in different book. "...For he who is least among you all-he is the greatest."(Luke 9:48)

When Jesus saw all the other disciples getting mad at Zebedee's sons, wanting to sit on the both sides of Jesus in Heaven, He said this, which is also very hard for the one-dimensional worldly thought: "Jesus called them together and said, 'You know that the rulers of the Gentiles lord it over them, and their high officials exercise authority over them. Not so with you. Instead, whoever wants to become great among you must be your servant, and whoever wants to be first must be your slave'"(Matt 20: 25-27, Mark 10:42-44). And by saying "The greatest among you will be your servant. For whoever exalts himself will be humbled, and whoever humbles himself will be exalted."(Matt 23:11, 12), Jesus taught the fact that the way of comparison in the Heaven is completely different from the one in this world.

Therefore, when we teach students about the definition of the world of numbers and the dimensional relationship, we have to teach them to think from higher-dimensional view, as

the people of wider Heaven. We should not teach the way of worldly thinking, which causes competitive spirit by comparing who is better and who is worse. Because this is extremely low-dimensional way of thinking. Also, for students who are inferior than others, we should encourage them not to be possessed by inferiority complex or frustration, by teaching them the Heavenly rule of thinking. And for outstanding students, we should also teach them to be humble, instead of being proud, through the Heavenly rule of thinking. Of course, the teacher should be able to think spiritually, high-dimensionally first.

### 7. The Rule of Conversion and The Rule of Faith.

The corresponds that moves each point on the coordinal plane onto the point on the same plane is called the conversion on the coordinal plane. When the conversion that moving point  $P(x,y)$  onto point  $P'(x',y')$  on the coordinal plane is called conversion  $f$ , it is represented as  $f: (x,y) \rightarrow (x',y')$  or  $f(P)=P'$  ( $P'$  is the image of point  $P$  according to  $f$ ). However, in order to move point  $P$  to  $P'$ , a certain method is needed, and we use matrix as the method. I do not think that I need to explain all the theories and principles of matrix in here, since math teachers should know those theories already. Therefore, I will simply describe just a few conversions.

Conversion that moves point  $P(x,y)$  to point  $P'(x',y')$  is represented as  $\begin{pmatrix} x' \\ y' \end{pmatrix} = \begin{pmatrix} a & b \\ c & d \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix}$ , this means that moving point  $P(x,y)$  to point  $P'(x',y')$  by using matrix  $\begin{pmatrix} a & b \\ c & d \end{pmatrix}$ . This is called first conversion.

Here are some couple of examples of first conversion.

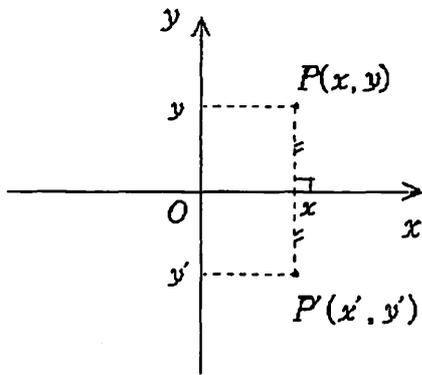
$\begin{pmatrix} x' \\ y' \end{pmatrix} = \begin{pmatrix} 1 & 0 \\ 0 & -1 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix}$  is a conversion that moves point  $P(x,y)$  on the coordinal plane onto the point  $P'(x',y')$  of symmetry due to the axis  $x$ , using the matrix  $\begin{pmatrix} 1 & 0 \\ 0 & -1 \end{pmatrix}$ .

In that same manner, matrix  $\begin{pmatrix} -1 & 0 \\ 0 & 1 \end{pmatrix}$  is matrix of symmetrical

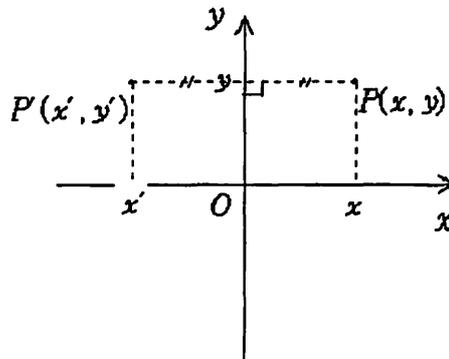
conversion due to the axis  $y$ ; matrix  $\begin{pmatrix} -1 & 0 \\ 0 & -1 \end{pmatrix}$  is matrix of symmetrical conversion due to the origin; matrix  $\begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix}$  is matrix of symmetrical conversion due to the straight line  $y=x$ ; matrix  $\begin{pmatrix} \cos \theta & -\sin \theta \\ \sin \theta & \cos \theta \end{pmatrix}$  is matrix of conversion that rotates the point  $P(x, y)$  due to the size of angle  $\theta$ , centering the origin.

There are a lot more kinds of matrix, but here is one more example: matrix  $k\begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$  is resemble conversion, which resemble ratio is  $k$ , centering the origin of the coordinal plane. These conversions are shown on the coordinal plane like this:

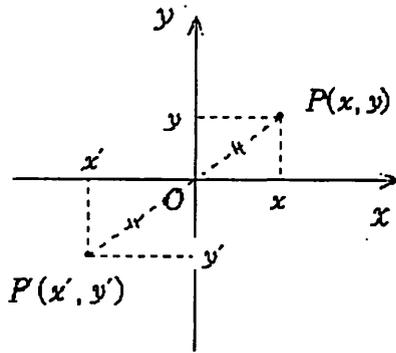
① symmetrical conversion due to the axis  $x$



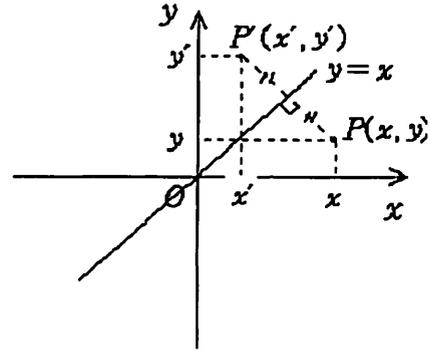
② symmetrical conversion due to the axis  $y$



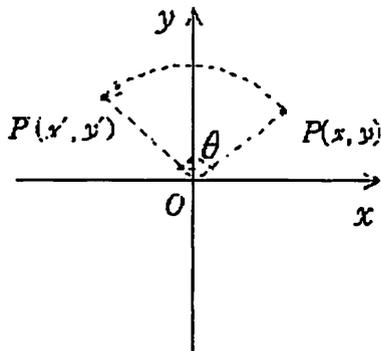
③ symmetrical conversion due to the origin



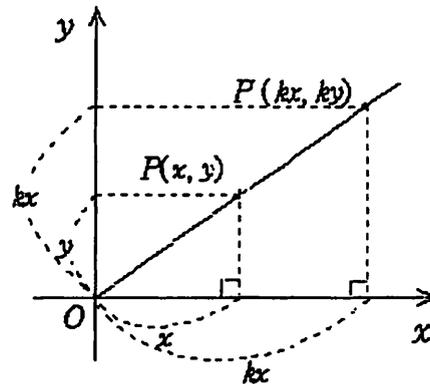
④ symmetrical conversion due to the straight line  $y=x$



⑤ conversion that rotates



⑥ resemble conversion



Furthermore, if we teach the conversion called synthetic conversion, we can change the location of the point using various kinds of conversion rules. Moreover, since a figure is made by points, we could also change the location of the figure. According to the resemble conversion, we can change not only the location but the size of a figure. If we develop the theory of conversion and teach upto second-conversion, then we can change a straight line to a curve, and curve to a straight line. I don't see a need of the theoretical background or descriptive examples.

Although it's a little different area, when we teach about the projection chart, we could see that the shadow of a solid figure can be appeared as a plane figure, that the shadow of a plane figure can be appeared as a line, that the shadow of a line can be appeared as a point.

My point is that by the rule of some kind of conversion or projection chart, a figure can be changed into a completely different figure, even into a different dimensional figure.

We can teach that our spiritual figure also can be completely changed its location and shape into Jesus' figure, when we use the rule of faith. In other words, "Yet to all who received Him, to those who believed in His name, He gave the right to become children of God-children born not of natural descent, nor of human decision or a husband's will, but born of God"(John 1:12, 13). Through the rule of faith, we could be changed from the children of man into the children of God. "For God so loved the world that He gave His one and only Son, that whoever believes in Him shall not perish but have eternal life"(John 3:16). Through the rule of faith, we are changed from the location of unavoidable death into the location of eternal life.

"We know that we have passed from death to life, because we love our brothers. Anyone who does not love remains in death"(1 John 3:14). In this verse, it says we were moved from death to life through the "Rule of Love". Therefore, we can say that the Rule of Love and the Rule of Faith is the same thing. Although it is important to teach the various mathematical rules of conversion, it is a lot more important to teach the Conversion Rule of Faith and Love, which makes us children of God, and moves us from death to life, and changes us from the figure of death into the figure of life. "The word became flesh and made His dwelling among us. We have seen His glory, the glory of the One and Only, who came from the Father, full of grace and truth"(John 1:14). It would be also the Rule of Love that the Word, Infinite God became a man; however, this profundity would be another rule of conversion that should be studied when we go to Heaven.

### **III. Conclusion**

While teaching mathematics in the middle and high school classes, I often have opportunities to help students to understand the Bible through the definitions and concepts of mathematics. Since the students are young, I find it difficult to explain with higher scientific theories. Some scientists and theologians who are well established in their fields may think that some of the explanations are not appropriate or good enough to help Biblical comprehension. However, I think that mathematical explanation is a quite logical method to help students who are living with many questions about the Bible. Even though we need deeper study, for the integration of mathematics and faith, it is more important for math teacher to be the one who thinks and behaves rationally like the specific character of

mathematics and a true christian, and the one who stands in front of students possessing Christ's character, rather than to be a teacher who simply uses these theoretical mathematics and Biblical backgrounds. It will be the only way to integrate faith and learning in our lives,