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EXPLORATION OF MATHEMATICS CONCEPTS IN *QS AN-NUR*

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Abstract. This article reveals exploration of mathematical models and concepts in *QS An-Nur: 24:26*. This research stems from the ineffectiveness of learning mathematics because the process does not begin with students' initial understanding. In fact, according to NCTM, teaching and learning will be effective if it starts from what students know. In Islamic school students, initial knowledge can be extracted from the Qur'an because the Qur'an is a learning tool in believing in Islam, so it is recognized that the verses of the Qur'an are contained in the cognitive structure of students, which can facilitate learning. Unfortunately, the sources of learning mathematics and the Qur'an used by Islamic schools have not covered all topics of learning mathematics, so to complete it, it is necessary to model the verses of the Qur'an related to mathematics. This research was conducted to obtain mathematical modeling and concepts at the high school/equivalent level using the Miles and Huberman analysis method combined with Blum and Leib modeling and Abdussakir theory and Pseudo concrete. Based on the combination of analytical theory, the modeling and mathematical concepts contained are relations, surjective and bijective functions, inverse functions, and reflections.

Keywords: Exploration, Mathematical Concepts, *QS An-Nur:24:26*

I. INTRODUCTION

Muslim mathematics education researchers axiomatically admit that the Qur'an is the primary reference source for the development of mathematical concepts (Khalifa, 1973; Al-Faqih, 2017; Abdussakir, 2014). It is shown from several studies that explore the Qur'an so that mathematical ideas are achieved in it be it a mathematical concept or model. Godino (a mathematical concept is an abstract idea that groups an event according to examples and not examples. Resmawan (2017:8) mathematical models are the result of mathematical constructions designed to understand phenomena in certain formal languages. Among them, Yulista (2018, p.85-86) explores Mathematical Interconnection in the Angle and Huda Materials (2019, p.51-52) regarding the Exploration of Al-Qur'an Based High School Mathematics Values. On the other hand, the Muslim academic community such as

Abdussakir 2014 Basya 2004 and Syamaun 2020 became a portrait of the Mathematics of the Qur'an from the printed book of their thoughts. Attracts attention, in his work (Syamaun, 2020, p.35-41) written in Q.S An-Nur:24:26 contains the concept of algebraic forms. However, remember from the research study of the exploration of two different researchers who focused on *QS Al-Muzzammil Verse 20* produced a different mathematical concept, namely Pebriansyah (2020, p. 63-64), who discovered the concept of number patterns while the concept of the division was discovered by Cahya & Ahmadi (2020, p.80 -81). Implying, essentially, a verse can give birth to more than one mathematical idea. Besides that, it explicitly makes us aware of the breadth of knowledge from Allah Subhanahu Waa Ta'ala, which we should study in-depth in the Qur'an and is strengthened in *QS Al-Kahf: 18:109*, Thus, in *QS An-Nur: 24:26*, it is felt that it can give birth to new mathematical

ideas that have not been revealed to answer the needs of the development of science in the world of education.

Indonesia is one of the countries where the population is predominantly Muslim. Focusing on knowing the world of religious-based education in Indonesia to date, understanding and practicing the Qur'an has become an important icon, considering that the Qur'an is a means of learning to believe in Islam so that the Qur'an is assumed to be contained in the cognitive structure. Students. When students learn based on their scientific cognitive structure, they will receive knowledge comprehensively, in line with the influence of initial ability on mathematics learning outcomes (Lestari, 2017, p.83-84). In addition, paying attention to the Word of Allah Subhanahu Wa Ta'ala in Q.S Sad: 38: 29 and Q.S Al-Qamar: 54:17 becomes a call to education implementers in teaching and learning, including mathematics, which implies that the teaching and learning process will be more straightforward if you move from the Qur'an. The ease of learning has the potential to improve students' mathematical abilities.

Mathematics becomes a nightmare for many students and becomes the first subject that is considered difficult to learn (Alper: 2011), reinforced by information obtained from the website (Kemendikbud.go.id) stated that the results of the 2018 PISA study released by the OECD stated that mathematics ability in Indonesia was ranked 72 out of 78 countries, indicating that students' initial understanding is not the central aspect that is considered in starting the teaching and learning process, resulting in ineffectiveness in the teaching and learning process of mathematics in Indonesia (Anonymous: 2018). Based on teaching principles According to the National Council of Teacher Mathematics [NCTM] (2000) revealed that effective mathematics teaching requires an understanding of what students know and need to learn. However, this principle is not widely realized. This is supported by the results of interviews with the Mathematics Teacher of SMAIT Al-Fityan Kuburaya stated, The motivation to obtain mathematical concepts from the verses of the Qur'an, which can be used as learning resources for Islamic school students, is getting stronger.

The development of mathematical concepts that are born from the Qur'an will be realized in one verse that attracts attention, namely in *QS An-Nur: 24:26*. The previous study found the concept of algebra. However, a brief study has seen from the snippet of the translation of Q.S An-Nur: 24:26 "good women for good men and good men for good women (too)..." indicates a mathematical concept that has not been revealed. This study was conducted by combining the analysis technique of the Miles and Huberman model with the mathematical modeling of Blum and Leib, moving on from Pebriansyah's (2020) research which combines two analytical theories. On the other hand, in finding number structure or numerical analysis with mathematical calculations from the verse of the Qur'an, according to Yusufa (2014:350) uses mathematical calculation methods (numeric, alphabetical letters, and summation between digits. Mathematical calculations can be aimed at letters, words, verses and surahs in the Qur'an. In addition, Abdussakir

(2014) structures numbers of the number of letters hijaiyah by Abdussakir (2014) and the theory pseudo concept according to Vinner (in Wibawa 2015: 41) says that the ability to think about the meaning of a relationship or the resulting concept is a pseudo conceptual mode of thinking. Thiberghie and Vince (2004) Formulation of understanding of pseudo-concrete is generated based on the transition results of real objects or events and models of world theory. supporting theory as an attempt to explore the verse. Based on the description of the background above, the question, what mathematical models and concepts are contained in Q.S An-Nur:24:26? So that what will be achieved in this study is to describe the modeling and mathematical concepts contained in Q.S An-Nur:24:26.

II. METHODS

In line with the formulation of the problem, then the form of this research is library research with mathematical models and concepts contained in the Qur'an in Q.S An-Nur:24:26 as the object of research. So, the data collection technique is in the form of documents, in the form of writings such as the Qur'an and its translation, interpretation of the Qur'an, and other literature. The data collection tool is a human instrument or researcher who examines data based on direct exploration results using the Tafsir Ibnu Katsir application by Muslim Media.

The analytical technique used is the Miles and Huberman model (in Sugiyono 2018, p.337). This activity consists of a data reduction step related to the discussion of Ibnu Katsir's interpretation, presenting a numerical analysis of the essential words from the snippet of the verse of Q.S An-Nur: 24:26 that is needed and putting aside the unnecessary hijaiyah letters. Then, the data display stage is presented in a narrative model in a table based on numerical analysis with an interpretation of the previous paragraph's discussion. Furthermore, conclusion drawing and varication brief presents the results from beginning to end.

Seeing the scientist context discussed is mathematics, it is necessary to have a based theory so that Blum and Leib (2011, p.15-30) modeling is chosen with seven cycles of mathematical modeling, namely, constructing, structuring, and simplifying, Mathematizing, Working Mathematically, Interpreting, Validation, Exposing. These seven modeling cycles are combined with Miles and Huberman's techniques. Considering the object of research is the verse of the Qur'an, it is necessary to have other supporting theories. In line with Abdussakir, (2014, p.6), it is written in the rule of structure one, namely, mesmerizing a verse with a large number of hijaiyah letters that compose the verse.

Thus, Considering the importance of a clear problem understanding about the situation to be modeled, it is necessary to have a pseudo-concrete thinking base in formulating mathematical modeling. The pseudo concrete theory (2015) is used when exploring verses to formulate keywords related to Q.S An-Nur:24:26 and in the analysis process table.

TABLE I
THE COMBINATION OF MILES AND HUBERMAN ANALYSIS TECHNIQUES
WITH BLUM AND LEIB . MATHEMATICAL MODELING THEORY

Analysis Miles and Huberman	Modelling Blum dan Leib
Data Reduction	Contracting
Data Reduction	Structuring and Simplifying
Data Reduction	Mathematising
Data Reduction	Working Mathematically
Data Display	Interpreting
Conclusion /Verification	Validation
	Exposing

III. RESULTS AND DISCUSSION

A. Resultas

1. Data Exploration Results of Al-Qur'an Verses Relating to Q.S An-Nur: 24:26

In exploring *QS An-Nur: 24:26*, it is deemed necessary to have a verse that supports *QS An-Nur: 24:26* to build a strong foundation in further analysis. Therefore, based on the translation of Q.S An-Nur: 24:26, several aspects are obtained based on pseudo concrete thinking so that it raises keywords and verses related to *QS An-Nur: 24:26* as follows.

TABEL II
EXPLORATION OF VERSES RELATED
TO *QS AN-NUR: 24:26*

Indication of the relationship of verse pieces	Keywords	Surah name, order of surah and Ayat
Relationship or partner to someone ("To")	Couple	<i>QS Adz-Dzariyat: 51:49</i>
Comparison of two objects ("good" and "evil")	More, big, and small	1. <i>QS An-Nisa: 4:3</i> , 2. <i>Surah An-Nisa: 4:34</i> , 3. <i>QS An-Nisa: 4:40</i>
Installation according to the level of the partner. ("good for good" and "abominable for vile")	Level	<i>Surah Al-Baqarah: 2:228</i>

2. The Study of Mathematical Modeling in *QS An-Nur: 24:26*

The study of mathematical modeling in *QS An-Nur: 24:26* was obtained by combining the analysis process with Miles and Huberman's analytical technique with Blum and Leib's Mathematical Modeling Theory (2011). This modeling study is obtained through the basis of pseudo concrete thinking and analysis of certain phrase pieces in *QS An-Nur: 24:26* which are formulated from numerical values (Abdussakir: 2014, p.6). In identifying the mathematical model in *QS An-Nur: 24:26*, it will separate the verse into word parts to be analyzed, focusing on the translation, which indicates the existence of a mathematical concept, presented as follows. (a) Al-khabīṣātu (vile women) lil-khabīṣīna (for vile men); (b) wal-khabīṣūna (and vile men) lil-khabīṣāt (for vile (too)

women); (c) waṭ-ṭayyibātu (and good women) liṭ-ṭayyibīna (for good men);

TABEL III
ANALYSIS OF POINTS A AND C

<i>Al-khabīṣātu lil-khabīṣīna</i> and <i>waṭ-ṭayyibātu liṭ-ṭayyibīna</i>	
Constructing	1. Can the similarity also be seen from the number of letters that make up the words? 2. Do these statements form relations and functions?
Structuring and Simplifying	Point A <i>Al-khabīṣātu</i> (Alif, Lām, Khā, Bā, Yā, Tsā, Tā) → Number of hijaiyah letters = 7 <i>lil-khabīṣīna</i> (Lām,Lām,Khā, Bā, Yā, Tsā, Yā, Nūn) = 8 point A does not change because there are no conjunctions included. Before (point c): <i>waṭ-ṭayyibātu</i> (Wāw, Alif, Lām, Thō, Yā, Bā, Tā) = 7 <i>liṭ-ṭayyibīna</i> (Lām, Lām, Thō, Yā, Bā, Yā, Nūn)= 7 After (point c): <i>Aṭ-ṭayyibātu</i> (Alif, Lām, Thō, Yā, Bā, Tā) = 6 <i>At-ṭayyibīna</i> (Alif, Lām, Thō, Yā, Bā, Yā, Nūn)= 7
Mathematising	<i>Al-khabīṣātu lil-khabīṣīna</i> → <i>Al-khabīṣātu lam Al-khabīṣīna</i> <i>Violent women for vile men</i> Then: 7 paired with 8 <i>waṭ-ṭayyibātu liṭ-ṭayyibīna</i> → <i>waw Aṭ-ṭayyibātu lam Aṭ-ṭayyibīna</i> <i>and good women for good men</i> Then: 6 paired with 7
Working Mathematically	Point A Violent women = A = -7 Violent men = B = -8 If A is worth -7 paired with B so, B is worth -8. Then B= -7+(-1)=-8 Point B Good women = A = 6 Good boy = B = 7 So, B = 6+1=7 Assuming women and men always get a partner, then $f: X \rightarrow Y$ with the function formula $f(X)=X+1, X \in \mathbb{Z}$ Based on Q.S An-Nisa: 4:43 it is assumed that women (plural: from 1 to 4) (X) can be paired with one man (Y) so that it is defined α_i : the value of good or bad from female to i , and $i = p \bmod 4$, with $p \in \mathbb{W}, \alpha_i \in \mathbb{Z}$ Based on Q.S An-Nisa: 4:43 then $\alpha_{0j} = \alpha_{1j} = \alpha_{2j} = \alpha_{3j}$ j : the j^{th} man who is the partner of the i^{th} woman. With, j as much as $m, j \in \mathbb{W}$, with $p \in \mathbb{W}$ then $i = 0, 1, 2, 3$ Formulated: $f(\alpha_{ij}) = \alpha_{ij} + 1$, with $i = p \bmod 4$, with $p \in \mathbb{W}$ with j as many as m pieces, and so obtained 2 cases, namely: $j \in \mathbb{W} \alpha_{ij} \in \mathbb{Z}$.

	1. $f(a_{ij}) = a_{ij} + 1$, with $i = j$, $i, j \in \mathbb{W}$ and $a_{ij} \in \mathbb{Z}$, bijective 2. $f(a_{ij}) = a_{ij} + 1$, with $i = p \bmod 4$, $p = 4r + s$ with $r \in \mathbb{W}$ and $0 \leq s \leq 3$, $s \in \mathbb{W}$ with j as many as m pieces, $j \in \mathbb{W}$ and $a_{ij} \in \mathbb{Z}$ surjective
Interpreting	Based on QS An-Nisa: 4:40, this number arrangement is generalized into a collection of real numbers that can represent even the smallest number from the level of human morality so that the context $a_{ij} \in \mathbb{R}$
Validation	The supporting verse is QS Al-Baqarah: 2:228 and QS An-Nisa: 4:34, QS Adz-Dzariyat: 51:49, QS Al-Lahab: 111:1-5, examples of pairs of good women and good men in Rasulullah Shalallahu Alaihi Wa Sallam and Khadijah (Source: Tafsir Ibn Kathir (An-Nur: 24:26)), and QS An-Nisa: 4:40
Exposing	1. $f(a_{ij}) = a_{ij} + 1$, with $i = j$ and $i, j \in \mathbb{W}$, $a_{ij} \in \mathbb{R}$ injective and surjective, then $f(a_{ij})$ is bijective. 2. $f(a_{ij}) = a_{ij} + 1$, is surjective function with $i = p \bmod 4$, $p = 4r + s$ with $r \in \mathbb{W}$ and $0 \leq s \leq 3$, $s \in \mathbb{W}$, with j as many as m pieces, $j \in \mathbb{W}$ and $a_{ij} \in \mathbb{R}$

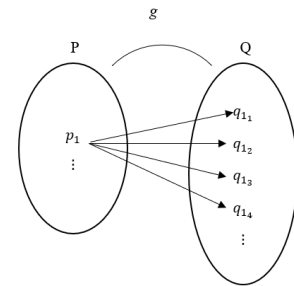
TABEL IV
ANALYSIS OF POINTS B AND D RELATED TO
POINTS A AND C

	a. Al-khabīṣātu lil-khabīṣina b. wal-khabīṣuna lil-khabīṣāt c. waṭ-ṭayyibātu liṭ-ṭayyibina d. waṭ-ṭayyibuna liṭ-ṭayyibāt
Construction	1. Is the opposite seen in the number of letters that make up the part of the word? 2. Will it form an inverse function?
Structuring and Simplifying	point b Al-khabīṣuna (Alif, Lām, Khā, Bā, Yā, Tsā, Wāw, Nūn) → Number of hijaiyah letters = 8 lil-khabīṣāt (Lām, Lām, Khā, Bā, Yā, Tsā, Tā) = 7 Point d Aṭ-ṭayyibuna (Alif, Lām, Thō, Yā, Bā, Wāw, Nūn) = 7 liṭ-ṭayyibāt (Lām, Lām, Thō, Yā, Bā, Tā) = 6
Mathematising	Wal-khabīṣuna lil-khabīṣāt → Waw Al-khabna Lam Al-khabīṣāt, then 8 is paired with 7 Waṭ-ṭayyibuna liṭ-ṭayyibāt → Waw Aṭ-ṭayyibāna Lam Aṭ-ṭayyibāt, then 7 is paired with 6
Working Mathematically	- Violent men = P = -8 - Violent women = Q = -7 - Then Q = -8 - (-1) = -7 - Good boy = P = 7 - Good women = Q = 6 - So, Q = 7 - 1 = 6 In this case, assuming women and men always get a partner, it can be written in the form of a function $g: X \rightarrow Y$ with the function formula $g(X) = X - 1$, $X \in \mathbb{Z}$. Based on QS An-Nisa: 4:43 it is assumed that men (X) can be paired with women (plural: from 1 to 4) (Y) so that it is de p_i: the value of good or bad from male to i, j: the j^{th} woman who is the partner of the i^{th} man. With, j as much as m, $j = u \bmod 4$, with $u \in \mathbb{W}$,

then $j = 0, 1, 2, 3$ and $p_{ij} \in \mathbb{Z}$.

It is formulated that j and $g(p_{ij}) = p_{ij} - 1$, with $j = u \bmod 4$, $u \in \mathbb{W}$ then $j = 0, 1, 2, 3$ and $p_{ij} \in \mathbb{Z}$ with i as many as n pieces, $i \in \mathbb{W}$ and so obtained 2 cases, namely: $p_{ij} \in \mathbb{Z}$.

1. $g(p_{ij}) = p_{ij} - 1$, with $i = j$ and $i, j \in \mathbb{W}$, $p_{ij} \in \mathbb{Z}$, g bijective
2. It only qualifies relation and not function because each domain element has more than one pair in the codomain.

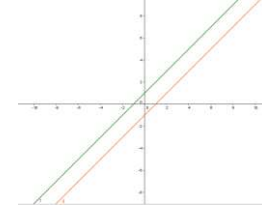


Review on the analysis table points a and c

It was found that it is bijective and (Surah An-Nisa: 4:40) after being tested, it fulfills that f and g are mutually inverse. $f(a_{ij}) = a_{ij} + 1$, with $i = j$ and $i, j \in \mathbb{W}$, $a_{ij} \in \mathbb{R}$ and $g(p_{ij}) = p_{ij} - 1$, with $i = j$ and $i, j \in \mathbb{W}$, $p_{ij} \in \mathbb{R}$

Interpreting

Interpretation of inverse f and g can be presented in the following figure



Validation

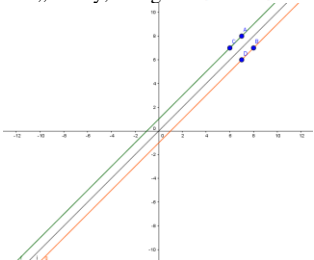
If $g(p_{ij}) = p_{ij} - 1$, $p_{ij} \in \mathbb{Z}$, then $g(x) = x - 1$, $x \in \mathbb{R}$. For example $y = g(x)$ and $x = g(y)$ then, $g(x) = x - 1 \rightarrow g'(x) = x + 1$
For then $f'(x) = x - 1$, $f(a_{ij}) = a_{ij} + 1$, $a_{ij} \in \mathbb{Z}$ then $f(x) = x + 1$, $x \in \mathbb{R}$

Exposing

$f(a_{ij}) = a_{ij} + 1$, $a_{ij} \in \mathbb{Z}$ then
 $f(x) = x + 1$, $x \in \mathbb{R}$ and
 $g(p_{ij}) = p_{ij} - 1$, $p_{ij} \in \mathbb{Z}$ then
 $g(x) = f'(x) = x - 1$, $x \in \mathbb{R}$.
 $f(x)$ will be mutually inverse with $g(x)$

TABEL V
ANALYSIS OF POINT A AGAINST B AND POINT C AGAINST D

	a. Al-khabīṣātu lil-khabīṣina b. wal-khabīṣuna lil-khabīṣāt c. waṭ-ṭayyibātu liṭ-ṭayyibina d. waṭ-ṭayyibuna liṭ-ṭayyibāt
Constructing	Can the opposite value also be seen from the number of letters that make up the parts of the words? Will it form the concept of mirroring?
Structuring and Simplifying	The following example is obtained a. Violent women = 7 b. Violent boy = 8

	Violent women = 7 c. Nice women = 6 good boy = 7 d. good boy = 7 Nice women = 6
Mathematising	point a: <i>Al-khabīšātu lil-khabīšīna</i> → <i>Al-khabīšātu lam Al-khabna</i>, then 7 is paired with 8, If written in ordered pairs then (7,8) point b: <i>Wal-khabīšūna lil-khabīšāt</i> → <i>Waw Al-khabīšūna lam Al-khabīšāt</i>, then 8 is paired with 7 → (8,7) point c: <i>Waṭ-ṭayyibātu liṭ-ṭayyibīna</i> → <i>Waw aṭ-ṭayyibātu lam aṭ-ṭayyibīna</i>, then 6 is paired with 7 → (6,7) point d: <i>Waṭ-ṭayyibūna liṭ-ṭayyibāt</i> → <i>Waw Aṭ-ṭayyibāna Lam Aṭ-ṭayyibāt</i>, then 7 is paired with 6 → (7,6)
Working Mathematically	relationship a and b $A(7,8) \rightarrow A(X_a, Y_a)$ and for $B(8,7) \rightarrow B(X_b, Y_b)$ Judging from the similarities, namely: $X_a = Y_b$ and $X_b = Y_a$ Assumption There is a principle of reflection, namely: X_a reflect the result Y_b and X_b reflect the result Y_a Proof :Determine the distance between points A and B $r_{A-B} = \sqrt{(x_b - x_a)^2 + (y_b - y_a)^2}$ $r_{A-B} = \sqrt{2}$ Since, the distance A from the mirror = the distance B from the mirror, then, the distance of the point to the mirror $\frac{1}{2} r_{A-B} = \frac{1}{2} \sqrt{2}$ Distance A from the mirror (C) (equation i) $r_{A-C} = \sqrt{(x_c - x_a)^2 + (y_c - y_a)^2}$ $2x_c^2 - 28x_c + 2y_c^2 - 32y_c + 225 = 0$ Distance B to mirror (C) (equation ii) $r_{B-C} = \sqrt{(x_c - x_b)^2 + (y_c - y_b)^2}$ $2x_c^2 - 32 + 2y_c^2 - 28y_c + 225 = 0$ Elimination of equations i and ii gives $x=y$ relationship c and d in the same way produce the equation $x=y$. Thus, it is obtained that a and b and c and d mirror each other on the line $X=Y$
Interpreting	We get, $A(7,8)$, $B(8,7)$, $C(6,7)$, $D(7,6)$, f: $x+1$, i: $x=y$, and $g: x+1$, $x \in \mathbb{R}$, $x \in \mathbb{R}$ 
Validation	The point $A(7, 8)$ is reflected on the line $Y=X$ producing the image $A'(8, 7)$, written as, $A(7,8) \xrightarrow{\text{garis } Y=X} A'(8,7)$ $\begin{pmatrix} x' \\ y' \end{pmatrix} = \begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix} \begin{pmatrix} 7 \\ 8 \end{pmatrix}$ $\begin{pmatrix} x' \\ y' \end{pmatrix} = \begin{pmatrix} 8 \\ 7 \end{pmatrix}$

	In the same way, the point $P(6, 7)$ is reflected on the line $Y=X$ to produce the image $P'(7, 6)$
Exposing	If $A(7,8)$ then $B=A'(8,7)$ and If $P(6,7)$ then $Q=P'(7,6)$ if the point $A(x, y)$ is reflected on the line $Y= X$, it produces an image $A'(y, x)$

3. Study of Some Mathematical Concepts in *QS An-Nur: 24:26*

This concept study is obtained through the analysis of certain phrase pieces in *QS An-Nur: 24:26* in the table above to find mathematical concepts.

a. Points A and C

The concept of a function with a pairing relation is obtained which comes from the word "Lâm" which means "to" which is defined in this analysis in the form of a pair/paired. So, forming the function $f: X \rightarrow Y$ with function formula $f(a_{ij}) = a_{ij} + 1$, with $i = j$ and $i, j \in \mathbb{W}$, $a_{ij} \in \mathbb{R}$ is bijective. Is a surjective function $f(a_{ij}) = a_{ij} + 1$, with $i = p \bmod 4$, $p = 4r + s$ with $r \in \mathbb{W}$ and $0 \leq s \leq 3$, $s \in \mathbb{W}$, with j as many as m pieces, $j \in \mathbb{W}$ and $a_{ij} \in \mathbb{R}$

b. Points B and D Related to Points A and C

Based on table 4 shows the concept of an inverse function. If, a man will be paired with a woman (x) which forms a bijective function if $g(p_{ij}) = p_{ij} - 1$, with $i = j$ and $i, j \in \mathbb{W}$, $p_{ij} \in \mathbb{R}$ will only inverse each other with bijective function $f(a_{ij}) = a_{ij} + 1$, with $i = j$ and $i, j \in \mathbb{W}$, $a_{ij} \in \mathbb{R}$.

c. Point A Against B and Point C Against D

Based on table 5 shows the concept of reflection. In *Q.S An-Nur: 24:26*, it explains to humanity that Allah will pair men or women according to their partner's reflection, which in this case can be adapted like an object reflected on the $Y = X$ line. So it is obtained that if the point $A(X, Y)$ is reflected on the line $Y = X$, it produces an image $A'(Y, X)$.

B. Discussions

1. Mathematical Modeling

Based on the analysis table, so that the discussion of each stage is as follows. (1) Constructing, in table 3-5 will formulate a statement and a question; (2) Structuring and Simplifying, in table 3-5 reducing conjunctions so that the primary word is obtained, it is done by not taking into account the word "for" (Lâm) is a conjunction that states a relationship, a partner, and the word "and" (Wâw) is a word connect. In addition, it will number the number of hijaiyah letters from the summed base word to represent the numerical value of each phrase fragment; (3) Mathematising, in table 3-5 represents conjunctions, namely relations by assuming that the word "for" means "paired" and "waw" (and) is ruled out because it only functions as a liaison between clause and clause. Thus, a mathematical statement is obtained. In table 5 it is presented in the form of ordered

pairs; (4) Working Mathematically, in tables 3 and 4 analyze based on indications of two different morals, namely vile and sound, so that in formulating mathematical equations, it is adjusted back to conditions. Thus, an example is obtained that the number of letters in the installation of "evil" will be negative, expressed in the form of negative integers, during the installation of "good" in the form of positive integers. The example is based on the scope of the discussion, namely numbers that will form mathematical equations that form functions. Then it will be categorized according to the type of function. Based on so in the formulation of mathematical equations adjusted back to the conditions. Thus, an example is obtained that the number of letters in the installation of "evil" will be negative, expressed in the form of negative integers, during the installation of "good" in positive integers. The example is based on the scope of the discussion, namely numbers that will form mathematical equations that form functions. Then it will be categorized according to the type of function. Based on so in the formulation of mathematical equations adjusted back to the conditions. Thus, an example is obtained that the number of letters in the installation of "evil" will be negative, expressed in the form of negative integers, during the installation of "good" in the form of positive integers. The example is based on the scope of the discussion, namely numbers that will form mathematical equations that form functions. Then it will be categorized according to the type of function. The example is based on the scope of the discussion, namely numbers that will form mathematical equations that form functions. Then it will be categorized according to the type of function. The example is based on the scope of the discussion, namely numbers that will form mathematical equations that form functions. Then it will be categorized according to the type of function. The example is based on the scope of the discussion, namely numbers that will form mathematical equations that form functions. Then it will be categorized according to the type of function and based on Q.S An-Nisa: 4:43, so that the formula for the function relevant to real conditions is formulated. Meanwhile, in table 5, there are indications of reflection. The calculation begins by finding the distance between two points (point and image point) so that the distance between the point and the mirror and the image point with the mirror is obtained. Based on these results, look for the equation of the mirror line from that point with the equation obtained from a distance between the two points so that the equation of the line $Y=X$; (5) interpreting, in table 3 the interpretation is carried out on the process of generalizing the condition of the function according to Q.S An-Nisa: 4:40 so that the scope of the discussion becomes and is represented in graphical form as in tables 4 and 5; (6) Validation, in table 3 is carried out by strengthening the verse that supports Q.S An-Nur: 24:26, for table 4 validation is carried out by testing the two inverse functions, while table 5 is validated by substituting the known value in the formula for mirroring the axis $Y=X$; (7) Exposing, in table 3-5 describes the general conclusions and answers from the problem formulation at the constructing stage R.

2. Math Concepts

a. Points a and c

The concept of one-to-one (bijective) and surjective functions based on word indications in the translation which

can be interpreted as a relationship between objects written on the letter "lam" which means "to" in this case, is assumed to be a pair. Two sets were found, following up on the existence of two sets connected by relation, and after reviewing that each object has a pair from the two sets, it forms a bijective and surjective function according to the case.

b. Points B and D Related to Points A and C

The concept of an inverse function is obtained based on the numerical relationship at points b and d with points a and c. Given that points b and d are bijective functions with and a and c are also bijective, we get based on their numerical and the relation of the words in the translation. It is indicated that there is an inverse for each element f and g . As well as numerical values that are opposite to each other, it is obtained based on mathematical calculations that, in fact, f and g are inverses of each other $g(p_{ij}) = p_{ij} - 1, p_{ij} \in x$ then $g(x) = f'(x) = x - 1, x \in \mathbb{R}$. If $(a_{ij}) = a_{ij} + 1, a_{ij} \in x$ then $f(x) = x + 1, x \in \mathbb{R}$.

c. Point A Against B And Point C Against D

The concept of reflection is obtained based on the numerical relationship in the analysis of points a to b and points c to d. From the numerical point of view, the ordered pairs of points a to b have inverses to form $X_a=Y_b$ and $X_b=Y_a$. Based on the concept of reflection in the table above, the distance A(7,8) to $Y=X$ is the same as the distance B(8,7) to $Y=X$ in the table, so that based on the definition of reflection, B is A' (image point of A). Thus, describing the concept of reflection of a point on the line $Y=X$.

IV. CONCLUSION

Based on the results and discussion, the conclusions of this study will answer two problem formulations, namely modeling and mathematical concepts in QS An-Nur: 24:26. Mathematical modeling points A and C that is, which contains the concept of a bijective function and $f(a_{ij}) = a_{ij} + 1$, with $i = j$ and $i, j \in \mathbb{W}, a_{ij} \in \mathbb{R}$ $f(a_{ij}) = a_{ij} + 1$ with contains the concept of a surjective function $i = p \bmod 4, p = 4r + s$ with $r \in \mathbb{W}$ and $0 \leq s \leq 3, s \in \mathbb{W}$, with j as many as m piece, $j \in \mathbb{W}$ and $a_{ij} \in \mathbb{R}$.

For paragraph sections B and D related to points A and C, $g(p_{ij}) = p_{ij} - 1$ with $i = j$ and $i, j \in \mathbb{W}, p_{ij} \in \mathbb{R}$ and for another case in the snippet of this verse, namely, if a man can have a partner between 1-4 women so that, based on the definition of the function, in this case, it is not fulfilled meaning it is not a function. If the relationship is reviewed f . Thus, $f(a_{ij}) = a_{ij} + 1, a_{ij} \in X$ then $f(x) = x + 1, x \in \mathbb{R}$ and will be mutually inverse with Thus, containing the concept

of an inverse function $g(p_{i_j}) = p_{i_j} - 1, p_{i_j} \in x$ then $g(x) = f'(x) = x - 1, x \in \mathbb{R}$.

The four sentences explain that women and men will be paired according to themselves (mirror). Describing the reflection of the line $Y=X$, so that the mathematical model is found, namely

$$A(X, Y) \xrightarrow{\text{garis } Y=X} A'(Y, X)$$

So that the problem contains the concept of mirroring the line $Y=X$

Finally, it is suggested several things, namely the discussion of research can be developed more broadly by considering the exceptions to certain events in *QS An-Nur: 24:26* with other verses that support it. Furthermore, it is expected to master the sciences that can help the process of studying mathematics and mathematizing the Qur'an. In addition, this research can be developed as a teaching material that can be used for Islamic school students.

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