If \( r = \varnothing \), let \( P \) and \( Q \) be any two points on any line in \( x \). 

Establish \( A \in \varnothing \). 

Conclude \( x = A \). 

Thus \( A \in Z \). Let \( AB \) be any line in \( Z \).

Prove \( \varnothing \) to be any affine plane.
EX: $\Delta 5, 6, 7$.

**Theorem:**

To prove that $\Delta ABC$ is a right triangle, we need to show that one of its angles is $90^\circ$.

1. **Construct a Triangle:**
   - Draw a triangle $ABC$ with sides $AB$, $BC$, and $AC$.
   - Draw a perpendicular line from $A$ to $BC$ at point $D$.
   - Label the length of $AD$ as $x$ and the length of $BD$ as $y$.
   - Label the length of $AC$ as $z$.

2. **Prove Right Angle:**
   - Use the Pythagorean theorem: $x^2 + y^2 = z^2$.
   - If this equation holds true, then $\angle BAC$ is a right angle.

3. **Conclusion:**
   - If $\angle BAC = 90^\circ$, then $\Delta ABC$ is a right triangle.

**Proof:**

- **Step 1:** Draw a line from $A$ perpendicular to $BC$ at point $D$.
- **Step 2:** Label the distances as $x$ and $y$.
- **Step 3:** Measure the length of $AC$ as $z$.
- **Step 4:** Use the Pythagorean theorem to prove $\angle BAC = 90^\circ$.

So, $\Delta ABC$ is a right triangle.
If $C$ is a parallel class in $x$, then $C$ contains the point set $X$.

From Exercise 2, we have $|C| = 2$. Hence, $C$ contains the point set $X$.

For any line $x$, let $X$ be the complement point set. So, $x$ is a line in $C$. By the complement point set, $E$ is unique. Thus, $E$ is parallel to $x$ (since all lines are parallel).

Say $E$ is not on any line in $C$. Use $x$ to get $y$. Since $|C| = 2$, and $|C| > 2$, there exists a line $x$ parallel to $x$, such that $x$ is contained in $C$.
By ax (A2), since \( A \neq BC \), there are at least 3 lines through \( A \) and \( 3 \) points in \( \mathbb{R}^2 \).

So \( A, B, C \), \( X \) are 4 points.
\text{Parallel to } AZ,
\text{line BD and XD through C, hence get coordinates ax (A2) because get X on } x \text{ axis parallel to } AZ \text{ as well as } A, \text{ be } \perp \text{to } BD \text{ at } C.

Have \perp \text{ in } \triangle ABC.

\text{If } |AC| = 2 \text{ (so } \perp \text{ a paralell class with coordinate } 2 \text{ line),}

\text{So } X, A, B, C \text{ are } 4 \text{ non-collinear pts.}

X \neq A + X \neq B, C \text{ since } A \perp BC.

\text{If } \text{ have at least } 2 \text{ points, so } A + X \neq Y.
In any finite affine plane $\mathbb{A}_n$, every line has $n+2$ points.