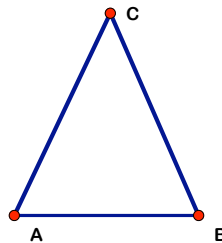


Theorem 13 (Pons Asinorum, Theorem 1.5.1 in the book). The base angles of isosceles triangle are congruent.



Denote the vertices of an isosceles triangle as A, B, and C. Assume that $|AC|=|BC|$.

Proof:

1. The corresponding sides of triangles $\triangle ABC$ and $\triangle BAC$ are equal.
2. $\triangle ABC \cong \triangle BAC$
3. $\angle A \cong \angle B$

Reasons:

1. $|AC|=|BC|$ from properties of the distance, $|BC|=|AC|$ is given, $|AC|=|BC|$ is given.
2. By SSS
3. By theorem 12.

Theorem 14 (Protactor postulate). Select a line AB and choose any point O between A and B. Then all angles with one side AB can be paired with real numbers between 0° and 360° , in such a way that $\angle AOA=0^\circ$, $\angle AOB=180^\circ$, if $\angle AOP=x$ and $\angle AOQ=y$ then $\angle POQ=|x-y|$. Equal angles are congruent.

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