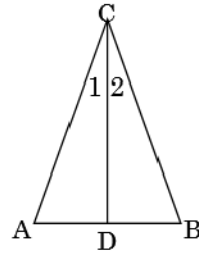


Definition of Isosceles Triangle: A triangle having two equal or congruent sides

1. Isosceles Triangle Theorem

Given: $\triangle ABC$ is isosceles
where $\overline{AC} \cong \overline{BC}$

Prove: $\angle A \cong \angle B$

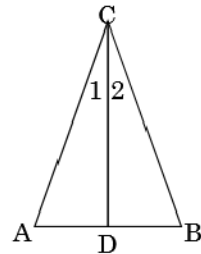


STATEMENTS	REASONS
1. $\triangle ABC$ is isosceles	1.
2. $\overline{AC} \cong \overline{BC}$	2.
3. Draw angle bisector CD	3. Every angle has one and only one bisector
4. $\angle 1 \cong \angle 2$	4.
5. $\overline{CD} \cong \overline{CD}$	5.
6. $\triangle ACD \cong \triangle BCD$	6. A
7. $\angle A \cong \angle B$	7. Corresponding parts of congruent triangles are congruent

2. Converse of Isosceles Triangle Theorem

Given: $\angle A \cong \angle B$

Prove: $\triangle ABC$ is isosceles



STATEMENTS	REASONS
1. $\triangle ABC$ and $\angle A \cong \angle B$	1.
2. Draw angle bisector CD	2.
3.	3. Definition of angle bisector
4. $\overline{CD} \cong \overline{CD}$	4.
5. $\triangle ACD \cong \triangle BCD$	5.
6. $\overline{AC} \cong \overline{BC}$	6.
7. $\triangle ABC$ is isosceles	7.