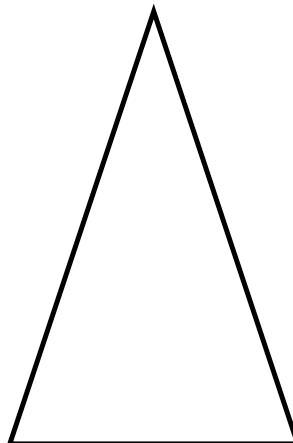
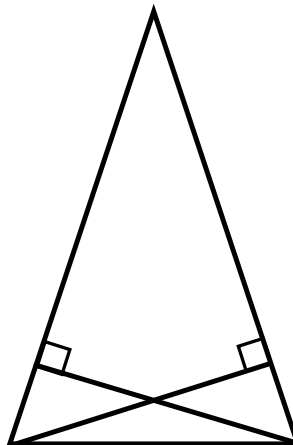


If two altitudes of a triangle are congruent, then the triangle is isosceles.

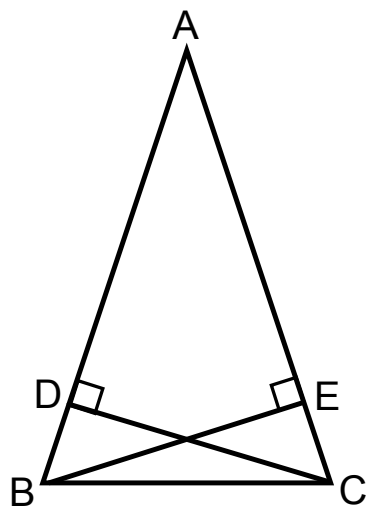
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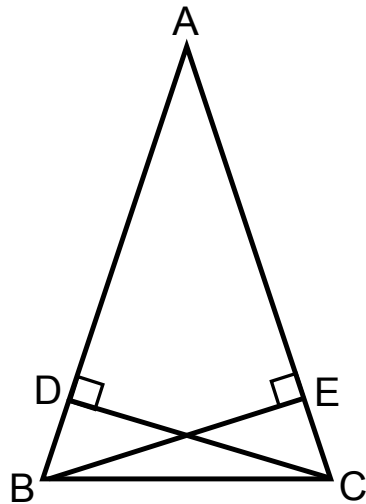
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Given: \overline{CD} and \overline{BE} are altitudes to \overline{AB} and \overline{AC} of $\triangle ABC$.
 $\overline{CD} \cong \overline{BE}$

Prove: $\triangle ABC$ is isosceles.



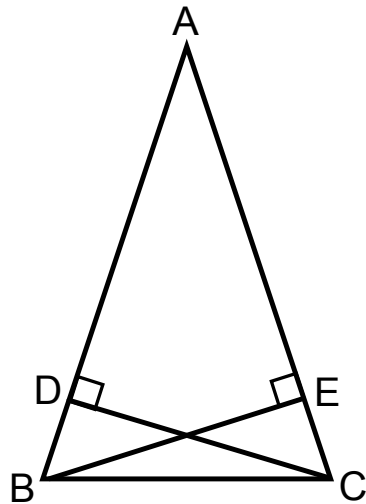
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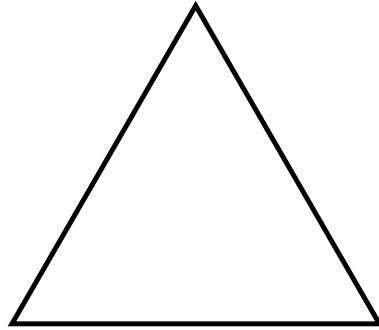
Given: $\overline{CD} \perp \overline{AB}$
 $\overline{BE} \perp \overline{AC}$
 $\overline{CD} \cong \overline{BE}$

Prove: $\overline{AB} \cong \overline{AC}$

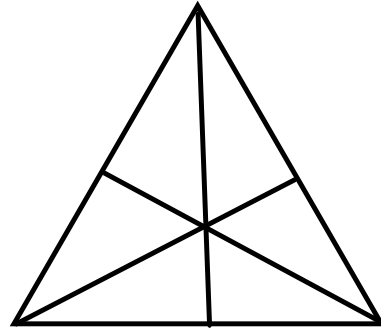


The medians of a triangle are congruent if
the triangle is equilateral.

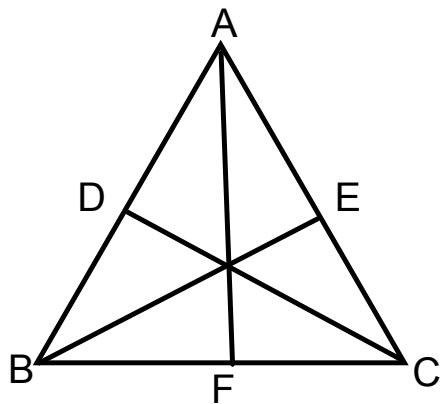
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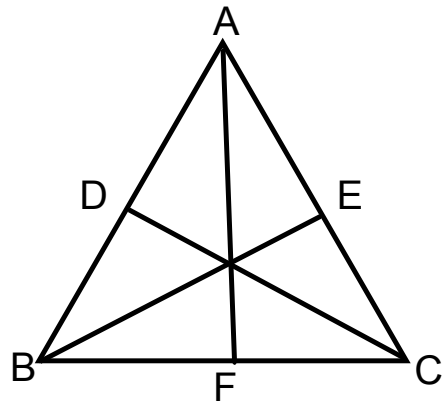


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Given:

Prove:

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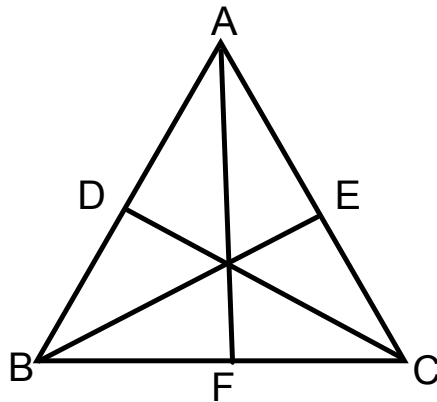
Prove:

The medians of a triangle are congruent if the triangle is equilateral.

Given: \overline{AF} , \overline{BE} , and \overline{CD} are all medians of equilateral $\triangle ABC$

Prove:

Given:



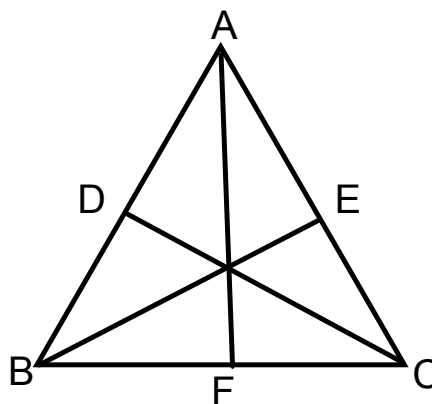
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Prove: $\overline{AF} \cong \overline{BE} \cong \overline{CD}$

Given:



Prove:

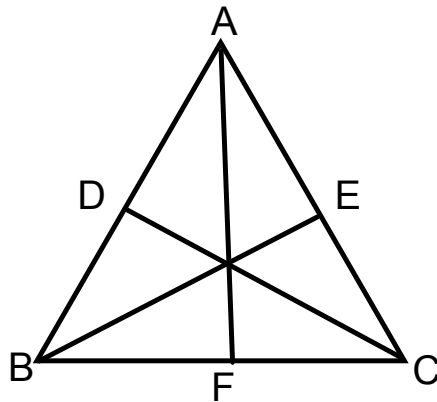
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Prove: $\overline{AF} \cong \overline{BE} \cong \overline{CD}$

Given: D is midpoint of \overline{AB}
F is midpoint of \overline{BC}
E is midpoint of \overline{AC}

Prove:



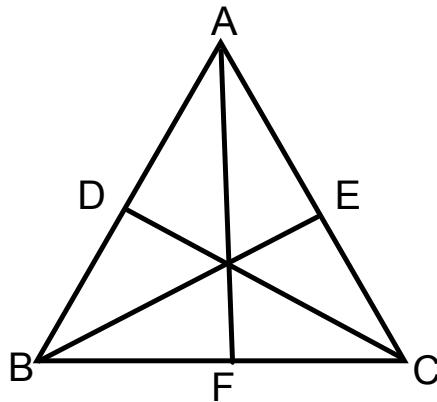
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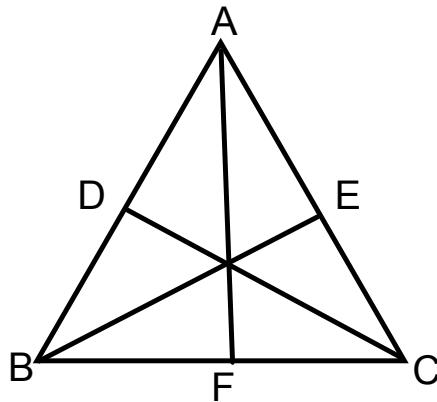
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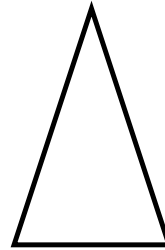
Prove: $\overline{AF} \cong \overline{BE} \cong \overline{CD}$



The altitude to the base of an isosceles triangle bisects the vertex angle.

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Given:



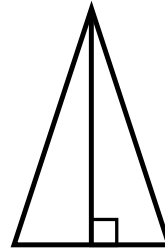
Prove:

Given:

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Given:



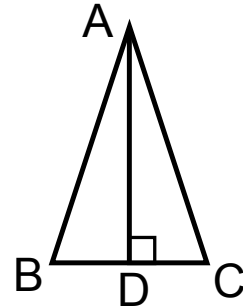
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The altitude to the base of an isosceles triangle bisects the vertex angle.

Given:



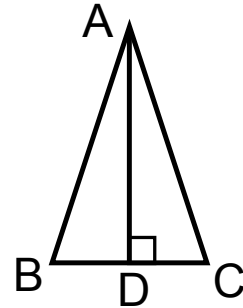
Prove:

Given:

Prove:

The altitude to the base of an isosceles triangle bisects the vertex angle.

Given: Isosceles $\triangle ABC$
with vertex $\angle BAC$ and
altitude \overline{AD} to side \overline{BC}



Prove:

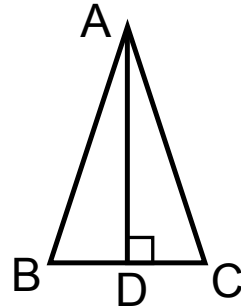
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Prove:

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Prove: \overline{AD} bisects $\angle BAC$



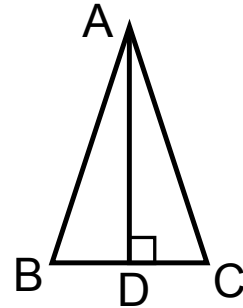
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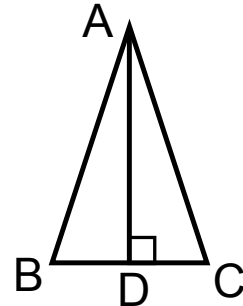
Given: $\overline{AB} \cong \overline{AC}$

Prove:

The altitude to the base of an isosceles triangle bisects the vertex angle.

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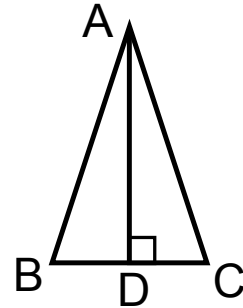
Given: $\overline{AB} \cong \overline{AC}$
 $\overline{AD} \perp \overline{BC}$

Prove:

The altitude to the base of an isosceles triangle bisects the vertex angle.

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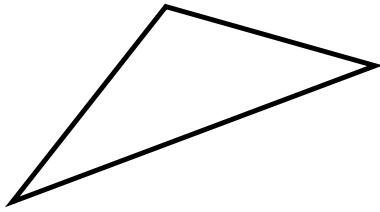


Given: $\overline{AB} \cong \overline{AC}$
 $\overline{AD} \perp \overline{BC}$

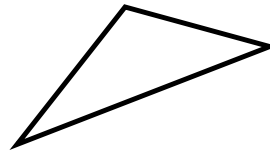
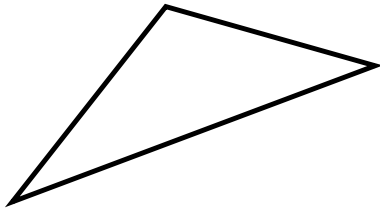
Prove: $\angle BAD \cong \angle CAD$

If two angles of one triangle are congruent to two angles of another triangle, the remaining pair of angles are also congruent.

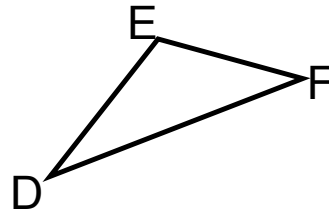
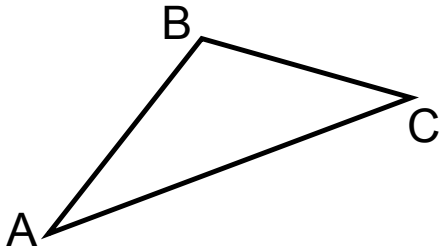
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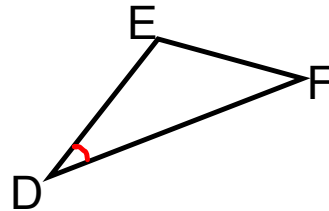
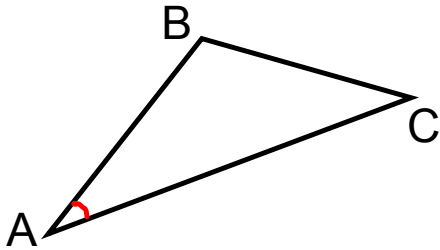
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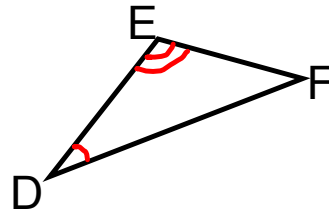
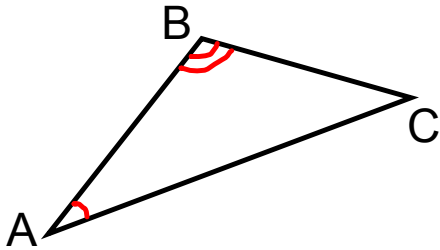
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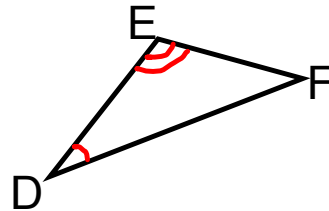
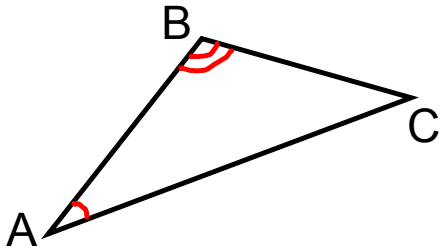
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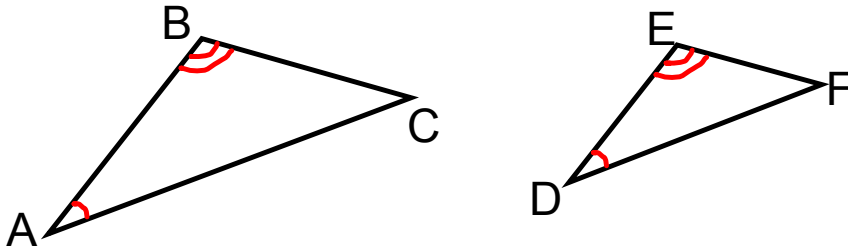
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Given:

Prove:

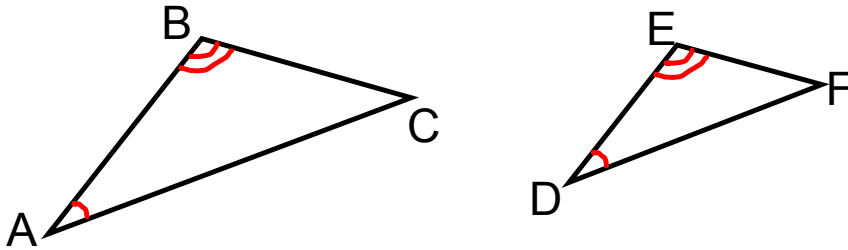
If two angles of one triangle are congruent to two angles of another triangle, the remaining pair of angles are also congruent.



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

Prove:

If two angles of one triangle are congruent to two angles of another triangle, the remaining pair of angles are also congruent.



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

Prove: $\angle C \cong \angle F$

In this lesson we
drew diagrams for
problems presented
with words.