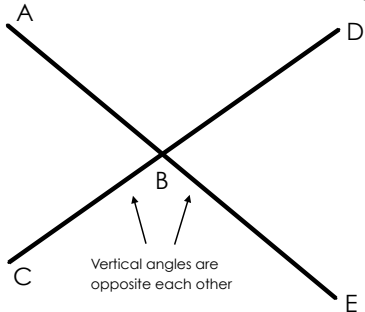


2.4 Essential Proof Vocabulary

Essential vocabulary you need to know before moving on to some real proofs

Vertical Angle Theorem

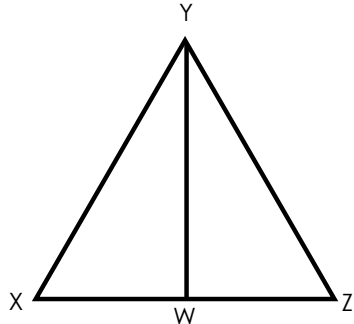


Theorem:

Statement:

Conclusion:

Reflexive Property




Theorem:

Statement:

Conclusion:

Midpoint Theorem

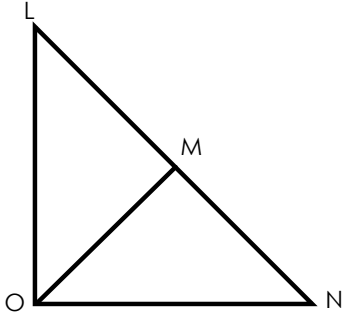


Theorem:

Statement:

Conclusion:

Perpendicular Angles Theorem

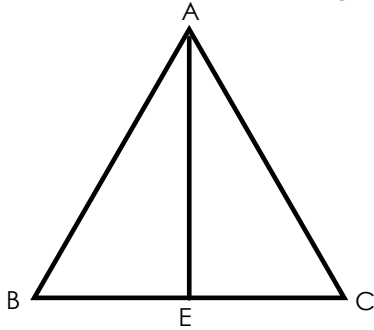


Theorem:

Statement:

Conclusion:

Segment Bisector Theorem



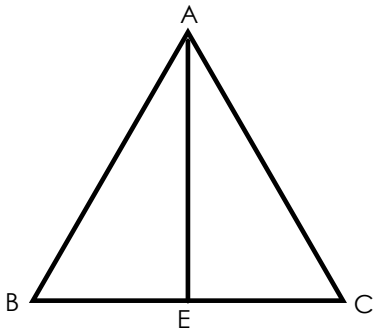
Theorem:

A segment bisectors divides a line into two congruent parts

Statement: \overline{AE} bisects \overline{BC}

Conclusion: $\triangle ABE \cong \triangle ACE$

Angle Bisector Theorem



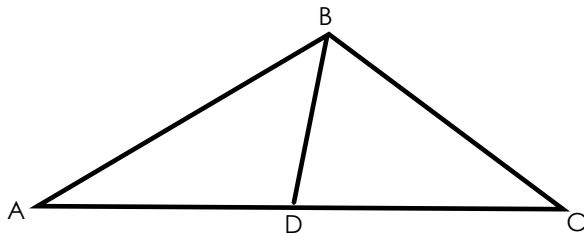
Theorem:

An angle bisectors divides an angle into two congruent parts

Statement: \overline{AE} bisects $\angle BAC$

Conclusion: $\triangle ABE \cong \triangle ACE$

Median of a Triangle



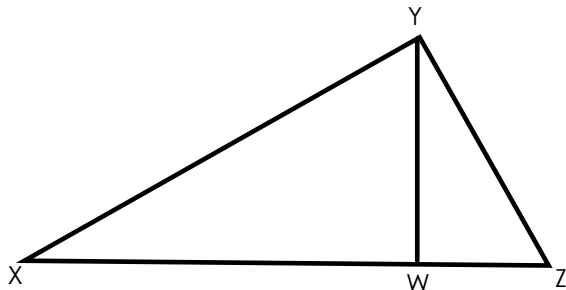
Theorem:

The median of a triangle is a line that joins the vertex with the midpoint of the opposite side

Statement: \overline{BD} is the median of $\triangle ABC$

Conclusion: $\triangle ABD \cong \triangle CBD$

Altitude of a Triangle



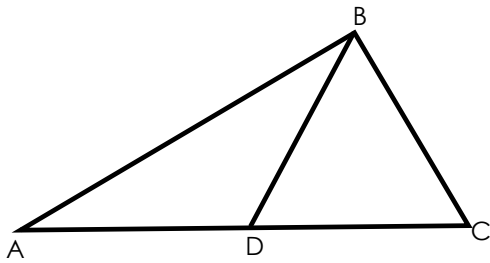
Theorem:

An altitude is a line which passes through a vertex of a triangle, and meets the opposite side at right angles

Statement: \overline{YW} is the altitude of $\triangle XYZ$

Conclusion: $\triangle XYW \cong \triangle YWZ$

Independent Practice



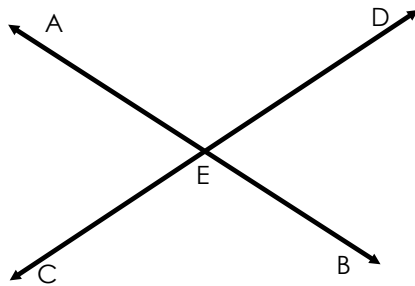
Given: \overline{BD} is the median of $\triangle ABC$

Conclusion:

$\underline{\hspace{2cm}} \cong \underline{\hspace{2cm}}$

Reason:

Restate theorem used to reach your conclusion

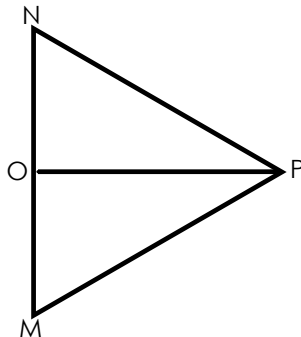


Given: \overline{AB} and \overline{CD} intersect at point E

Conclusion:

$\underline{\hspace{2cm}} \cong \underline{\hspace{2cm}}$

Reason:

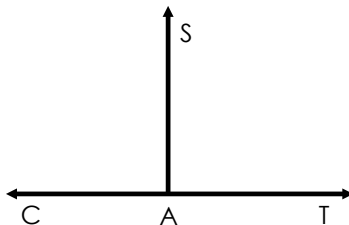


Given: \overline{PO} bisects $\angle NPM$

Conclusion:

$\underline{\hspace{2cm}} \cong \underline{\hspace{2cm}}$

Reason:

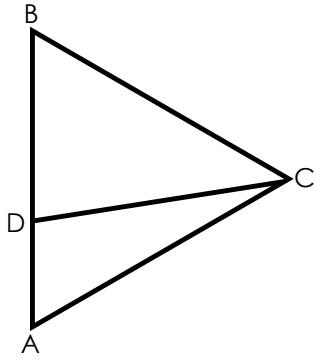


Given: $\overline{AS} \perp \overline{CT}$

Conclusion:

$\underline{\hspace{2cm}} \cong \underline{\hspace{2cm}}$

Reason:

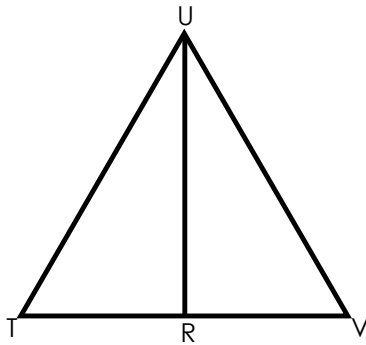


Given: $\triangle ADC$ and $\triangle BDC$ share side \overline{DC}

Conclusion: _____ \cong _____

Reason:

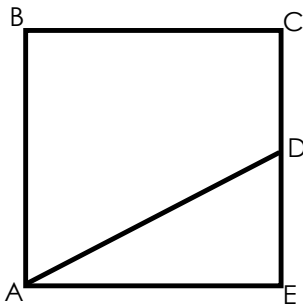
Restate theorem used to reach your conclusion



Given: \overline{UR} is the altitude of $\triangle TUV$

Conclusion: _____ \cong _____

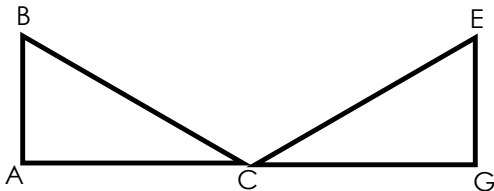
Reason:



Given: \overline{AD} bisects \overline{CE} in square ABCE

Conclusion: _____ \cong _____

Reason:



Given: C is the midpoint of \overline{AG}

Conclusion: _____ \cong _____

Reason: