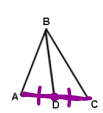
Name: _____ Date: _____

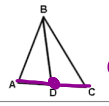
Using Vocabulary in Proofs

Given: D is the midpoint of $\overline{AC}$



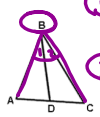
Statement	Reason
① D is the midpoint of $\overline{AC}$	① Given
② $\overline{AD} \cong \overline{CD}$	② A midpoint cuts a segment into 2 $\cong$ segments

Given: $\overline{BD}$ bisects $\overline{AC}$ at D



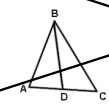
Statement	Reason
① $\overline{BD}$ bisects $\overline{AC}$ at D	① Given
② $\overline{AD} \cong \overline{CD}$	② A segment bisector cuts a segment into 2 $\cong$ segments

Given: $\overline{BD}$ bisects $\angle ABC$



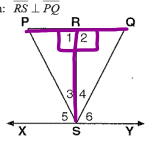
Statement	Reason
① $\overline{BD}$ bisects $\angle ABC$	① Given
② $\angle 1 \cong \angle 2$	② An angle bisector cuts an angle into 2 $\cong$ angles

Given: $\angle ADB$ and $\angle CDB$



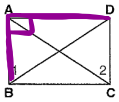
Statement	Reason

Given: $\overline{RS} \perp \overline{PQ}$



Statement	Reason
① $\overline{RS} \perp \overline{PQ}$	① Given
② $\angle 1$ & $\angle 2$ are right angles	② $\perp$ lines form right angles
③ $\angle 1 \cong \angle 2$	③ All right angles are $\cong$

Given: $\angle BAD$ is right

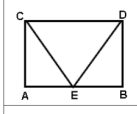


Statement	Reason
① $\angle BAD$ is right	① Given
② $\overline{AD} \perp \overline{AB}$	② Right angles are formed by $\perp$ lines

Given: $\angle ADB$ and $\angle CDB$ are supplementary

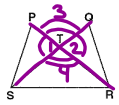
Statement	Reason
① $\angle ADB$ & $\angle CDB$ are Supplementary	① Given
② $\angle ADB + \angle CDB = 180°$	② Supplementary angles add up to 180°

Given: $\angle ECA$ and $\angle ECD$ are complementary



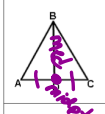
Statement	Reason
① $\angle ECA$ & $\angle ECD$ are complementary	① Given
② $\angle ECA + \angle ECD = 90°$	② Complementary angles add up to 90°

Given: Intersecting lines $\overline{STQ}$ and $\overline{PR}$



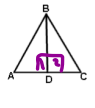
Statement	Reason
① Intersecting lines $\overline{STQ}$ and $\overline{PR}$	① Given
② $\angle 1 \cong \angle 2$, $\angle 3 \cong \angle 4$	② Intersecting lines form $\cong$ vertical angles

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



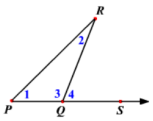
Statement	Reason
① $\overline{BD}$ is a median of $\triangle ABC$	① Given
② D is a midpoint	② A median of a $\triangle$ connects a vertex to the midpoint on the opposite side
③ $\overline{AD} \cong \overline{CD}$	③ A midpoint cuts a segment into 2 $\cong$ segments

Given: $\overline{BD}$ is an altitude of triangle ABC



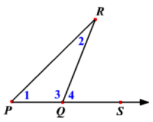
Statement	Reason
① $\overline{BD}$ is an altitude of $\triangle ABC$	① Given
② $\overline{BD} \perp \overline{AC}$	② An altitude of a $\triangle$ is $\perp$ to the base
③ $\angle 1$ and $\angle 2$ are right angles	③ $\perp$ lines form right angles
④ $\angle 1 \cong \angle 2$	④ All right angles are $\cong$

Given: $\angle RQS$ is an exterior angle of triangle PRQ



Statement	Reason
① $\angle RQS$ is an exterior angle of $\triangle PRQ$	① Given
② $\angle RQS + \angle 3 = 180$	② An exterior angle plus its adjacent interior angle adds up to 180

Given: $\angle RQS$ is an exterior angle of triangle PRQ



Statement	Reason
① $\angle RQS$ is an exterior angle of $\triangle PRQ$	① Given
② $\angle RQS = \angle 1 + \angle 2$	② An exterior angle of a $\triangle$ equals the sum of its 2 nonadjacent interior angles