

Name: _____ Date: _____

Using Vocabulary in Proofs

<p>Given: F is the midpoint of \overline{BC}</p>	<p>Statement: \overline{DF} is the midpoint of \overline{BC}</p> <p>Reason: $\textcircled{1}$ Given</p> <p>Statement: $\textcircled{2} \overline{BF} \cong \overline{CF}$</p> <p>Reason: $\textcircled{2}$ A midpoint cuts a segment into 2 \cong segments</p>
<p>Given: \overline{AM} is the median</p>	<p>Statement: $\textcircled{1} \overline{AM}$ is the median</p> <p>Reason: $\textcircled{1}$ Given</p> <p>Statement: $\textcircled{2} \overline{BM} \cong \overline{MC}$</p> <p>Reason: $\textcircled{2}$ A median of a Δ connects a vertex to the midpoint on the opposite side</p> <p>Statement: $\textcircled{3} \overline{RM} \cong \overline{TM}$</p> <p>Reason: $\textcircled{3}$ A midpoint cuts a segment into 2 \cong segments</p>
<p>Given: $\overline{CD} \perp \overline{AB}$</p>	<p>Statement: $\textcircled{1} \overline{CD} \perp \overline{AB}$</p> <p>Reason: $\textcircled{1}$ Given</p> <p>Statement: $\textcircled{2} \angle 1$ and $\angle 2$ are right angles</p> <p>Reason: $\textcircled{2}$ \perp lines form right angles</p> <p>Statement: $\textcircled{3} \angle 1 \cong \angle 2$</p> <p>Reason: $\textcircled{3}$ All right angles are \cong</p>

<p>Given: 2 intersecting segments</p>	<p>Statement: $\textcircled{1} \angle 1 \cong \angle 3$</p> <p>Reason: $\textcircled{1}$ Given</p> <p>Statement: $\textcircled{2} \angle 1 \cong \angle 2$</p> <p>Reason: $\textcircled{2}$ Intersecting lines form \cong vertical angles</p> <p>Statement: $\textcircled{3} \angle 3 \cong \angle 4$</p> <p>Reason: $\textcircled{3}$ Vertical angles</p>
<p>Given: $\angle 1$ is complementary to $\angle 2$</p>	<p>Statement: $\textcircled{1} \angle 1$ is complementary to $\angle 2$</p> <p>Reason: $\textcircled{1}$ Given</p> <p>Statement: $\textcircled{2} \angle 1 + \angle 2 = 90^\circ$</p> <p>Reason: $\textcircled{2}$ Complementary angles add up to 90°</p>
<p>Given: ΔABC is isosceles with base \overline{AC}</p>	<p>Statement: $\textcircled{1} \Delta ABC$ is isosceles with base \overline{AC}</p> <p>Reason: $\textcircled{1}$ Given</p> <p>Statement: $\textcircled{2} \overline{BA} \cong \overline{BC}$</p> <p>Reason: $\textcircled{2}$ Isosceles Δs have 2 \cong sides (legs)</p>
<p>Given: \overline{CE} bisects \overline{AD} at E</p>	<p>Statement: $\textcircled{1} \overline{CE}$ bisects \overline{AD} at E</p> <p>Reason: $\textcircled{1}$ Given</p> <p>Statement: $\textcircled{2} \overline{AE} \cong \overline{DE}$</p> <p>Reason: $\textcircled{2}$ A segment bisector cuts a segment into 2 \cong segments</p>

<p>Given: \overline{BD} is an altitude of triangle ABC</p>	<p>Statement: $\textcircled{1} \overline{BD}$ is an altitude of ΔABC</p> <p>Reason: $\textcircled{1}$ Given</p> <p>Statement: $\textcircled{2} \overline{BD} \perp \overline{AC}$</p> <p>Reason: $\textcircled{2}$ In a Δ an altitude is \perp to the base</p> <p>Statement: $\textcircled{3} \angle 1$ and $\angle 2$ are right angles</p> <p>Reason: $\textcircled{3}$ \perp lines form right angles</p> <p>Statement: $\textcircled{4} \angle 1 \cong \angle 2$</p> <p>Reason: $\textcircled{4}$ All right angles are \cong</p>
<p>Given: $\angle AMR$ is an exterior angle of triangle AMT</p>	<p>Statement: $\textcircled{1} \angle AMR$ is an exterior angle of ΔAMT</p> <p>Reason: $\textcircled{1}$ Given</p> <p>Statement: $\textcircled{2} \angle AMR + \angle 3 = 180^\circ$</p> <p>Reason: $\textcircled{2}$ An exterior angle plus the adjacent interior angle add up to 180°</p> <p>Statement: $\textcircled{3} \angle AMR = \angle 1 + \angle 2$</p> <p>Reason: $\textcircled{3}$ An exterior of a Δ is equal to the sum of the 2 nonadjacent interior of angles</p>
<p>Given: $\angle ACD$ is a right angle</p>	<p>Statement: $\textcircled{1} \angle ACD$ is a right angle</p> <p>Reason: $\textcircled{1}$ Given</p> <p>Statement: $\textcircled{2} \overline{AC} \perp \overline{DC}$</p> <p>Reason: $\textcircled{2}$ Right angles are formed by \perp lines</p>
<p>Given: \overline{BE} bisects $\angle ABC$</p>	<p>Statement: $\textcircled{1} \overline{BE}$ bisects $\angle ABC$</p> <p>Reason: $\textcircled{1}$ Given</p> <p>Statement: $\textcircled{2} \angle 1 \cong \angle 2$</p> <p>Reason: $\textcircled{2}$ An angle bisector cuts an angle into 2 \cong angles</p>

<p>Given: Triangle DEF with \overline{DG} the bisector of $\angle EDF$</p>	<p>Statement: $\textcircled{1} \overline{DG}$ is the bisector of $\angle EDF$</p> <p>Reason: $\textcircled{1}$ Given</p> <p>Statement: $\textcircled{2} \angle 1 \cong \angle 2$</p> <p>Reason: $\textcircled{2}$ An angle bisector cuts an angle into 2 \cong angles</p>
<p>Given: \overline{AN} and \overline{BR} intersect at F</p>	<p>Statement: $\textcircled{1} \overline{AN}$ and \overline{BR} intersect at F</p> <p>Reason: $\textcircled{1}$ Given</p> <p>Statement: $\textcircled{2} \angle 1 \cong \angle 2$</p> <p>Reason: $\textcircled{2}$ Intersecting lines form \cong vertical angles</p> <p>Statement: $\textcircled{3} \angle 3 \cong \angle 4$</p> <p>Reason: $\textcircled{3}$ Vertical angles</p>
<p>Given: \overline{AE} and \overline{BD} bisect at C</p>	<p>Statement: $\textcircled{1} \overline{AE}$ and \overline{BD} bisect at C</p> <p>Reason: $\textcircled{1}$ Given</p> <p>Statement: $\textcircled{2} \overline{AC} \cong \overline{EC}$</p> <p>Reason: $\textcircled{2}$ A segment bisector cuts a segment into 2 \cong segments</p> <p>Statement: $\textcircled{3} \overline{BC} \cong \overline{DC}$</p> <p>Reason: $\textcircled{3}$ A segment bisector cuts a segment into 2 \cong segments</p>