Geometry

Constructing Perpendicular Bisectors

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Perpendicular Bisector- A segment which passes through a midpoint of a side and is perpendicular to that side.

Given the triangle below, follow Construction 1 on pg. 266 to construct the perpendicular bisector to segment AC. Explain how you did the construction IN YOUR OWN WORDS below the triangle. Complete the geometry statement below.

1)



B

C

A

\*\*\*\*If PQ is a perpendicular bisector, then \_\_\_\_\_ $≅MC$ AND PQ $⊥\\_\\_\\_\\_\\_\\_.$\*\*\*\*Constructing a Median

Median- A segment which starts at the vertex of a triangle and goes through the midpoint of the side opposite that vertex.

Given the triangle below, follow Construction 2 on pg. 267 to construct the median to segment BC. Explain how you did the construction IN YOUR OWN WORDS below the triangle. Complete the geometry statement below.

2).



B

C

A

\*\*\*\*If AM is the median, then \_\_\_\_\_\_$≅MC.$\*\*\*\*

Constructing an Altitude

Altitude- A segment which starts at the vertex of a triangle and is perpendicular to the side opposite that vertex.

Given the triangle below, follow Construction 3 on pg. 267 to construct the altitude to segment AC. Explain how you did the construction IN YOUR OWN WORDS below the triangle. Complete the geometry statement below.

3).

B

C

A

\*\*\*\*If BD is an altitude, then BD $⊥\\_\\_\\_\\_\\_\\_.$\*\*\*\*Constructing an Angle Bisector

Angle Bisector- A segment which starts at the vertex of a triangle and divides the angle into two congruent angles

Given the triangle below, follow Construction 4 on pg. 268 to construct the angle bisector of $∠A$. Explain how you did the construction IN YOUR OWN WORDS below the triangle. Complete the geometry statement below.

4).



B

A

C

\*\*\*\*If AL is an angle bisector then $∠BAL≅\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_.$\*\*\*\*