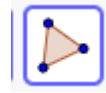


Construction of the Nine Point Circle

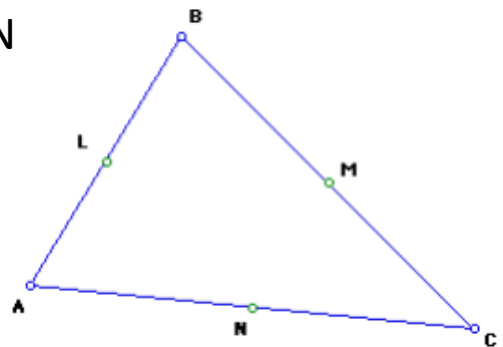
To construct a nine point circle of a triangle, follow these steps.


1. Use the Polygon tool to construct a triangle.

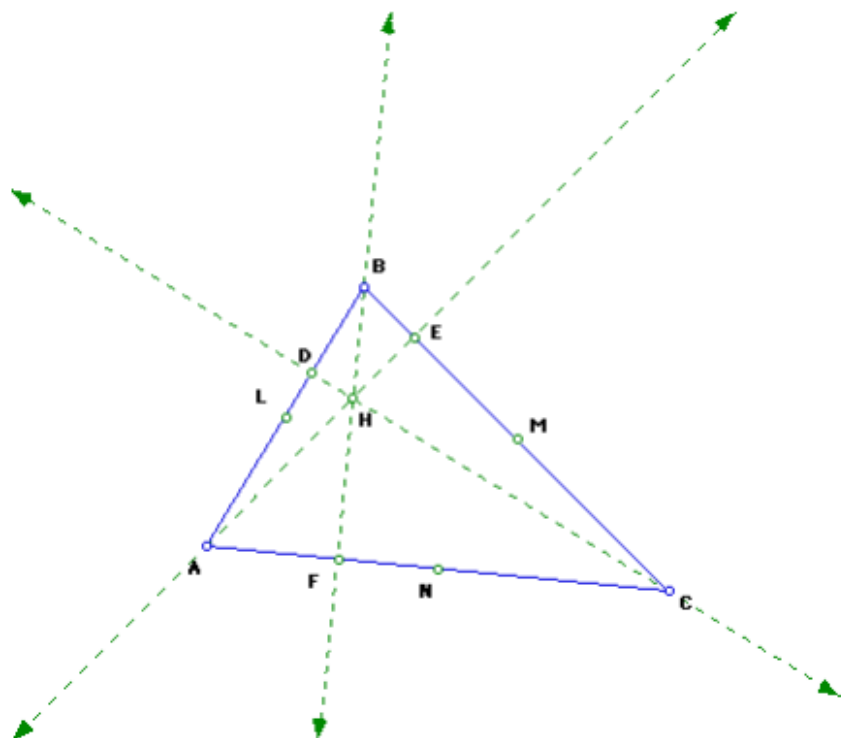


Label it $\triangle ABC$.

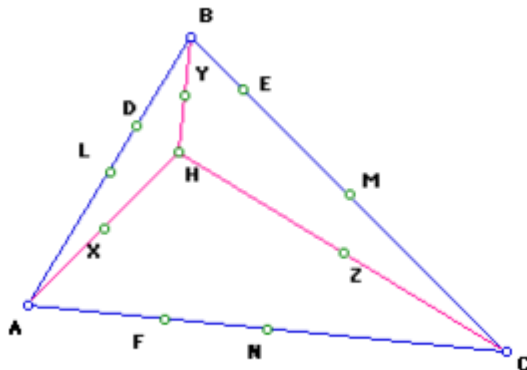
2. Next, use the midpoint tool to construct the midpoints of each side of the triangle. Label them L, M, and N



3. Use the perpendicular line tool  to construct the altitudes of the triangle and the intersection point tool to find the feet of the altitudes. Label them D, E, and F. Then use the same tool to find the **orthocenter**. Label it H.



4. Construct the midpoints of the segments AH, BH, and CH. Label them as X, Y, and Z. DO NOT HIDE any part of your construction! Notice that the nine points L, M, N, D, E, F, X, Y, and Z lie in a circle.



5. To find the center of the Nine Point Circle, use the construction tools to INSCRIBE $\triangle ABC$ and label the circumcenter P.
6. Construct the circle that passes through these nine points, L, M, N, D, E, F, X, Y, and Z. Watch this [video](#) to figure out how to find the exact center of the nine point circle.
7. Learn more about the Nine Point Circle [HERE](#). Then answer the questions on the Google forms document.