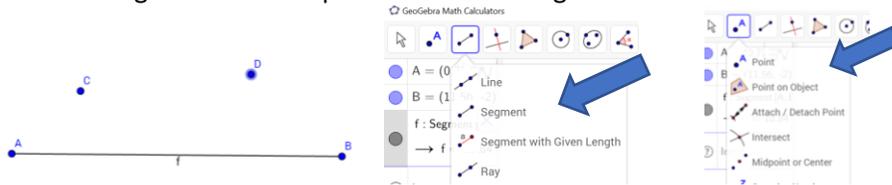


What Sides Form a Triangle? Exploration in GeoGebra

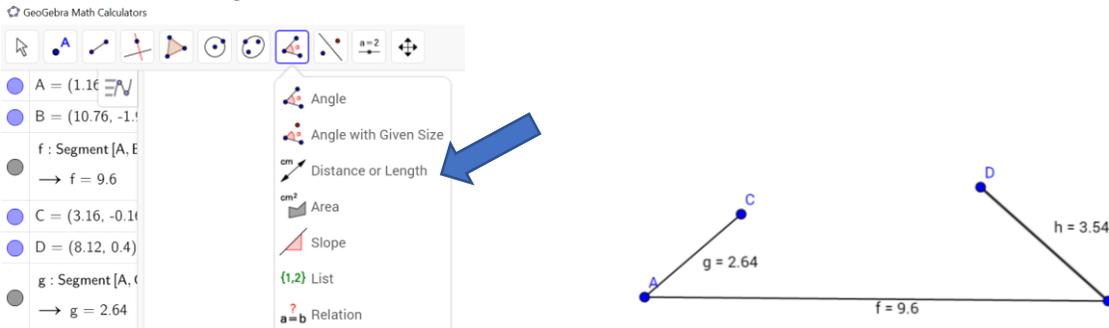
1. Open up GeoGebra. Turn off axes and grid.
2. Construct a segment and two points above the segment.



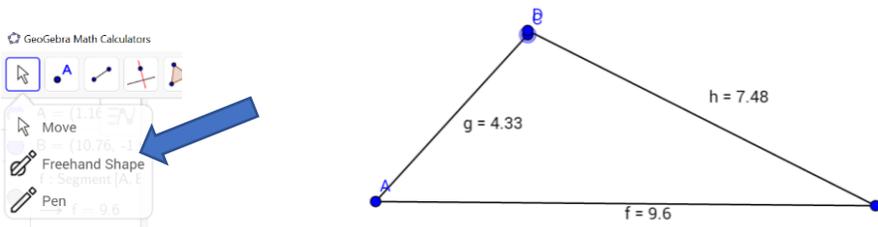
3. Construct segments connecting the endpoint of the segment to the closest point. (In this case, segment AC and BD)



4. Use the Distance or Length measuring tool to measure the length of each segment. Simply click on the tool, then click on the segment.



5. Now for the exploration! Use the move tool to drag points and explore lengths of sides that form a triangle and do not form a triangle. Complete the chart below. Be sure to include sides that form and do not form a triangle. The diagram above does not complete a triangle while the diagram below does complete a triangle.



Length of Sides			Is figure a triangle? Yes or No
Side 1	Side 2	Side 3	

6. Conclusion: What must be true for the segments to form a triangle?