

Special Segments of a Triangle

Time Estimate: ~15 minutes per numbered instruction

1. Draw a scalene triangle and its three medians. What observations can you make?

Verify that medians do indeed bisect the opposite side. Measure all segment lengths. Compare ratios of lengths.

2. On a new page, draw another triangle and its three altitudes. What observations can you make? Verify that altitudes are indeed perpendicular to opposite sides.

3. On a new page, draw another triangle and its three angle bisectors. What observations can you make? Verify that angle bisectors are indeed equidistant from both sides of the angle. Is the intersection of the angle bisectors equidistant from all sides of the triangle?

4. On a new page, draw another triangle and its three perpendicular bisectors. What observations can you make? Verify that perpendicular bisectors are indeed perpendicular to and bisect the sides of triangle. Is the intersection of the perpendicular bisectors the same distance from each of the vertices?