# Polygon Measurement

*Short-answer questions about length, angle, and area.*

## Measuring Carefully

Adjust the figures to find the requested measurements.

Geogebra link: https://tube.geogebra.org/m/gjf28er6

**Problem 1** *In figure above, when point $C$ is adjusted so that $BC$ is perpendicular to $AC$, $AC =$* $\boxed{2.1}$.

---

Geogebra link: https://tube.geogebra.org/m/a888zyw2

**Problem 2** *In $\triangle ABC$ above, the height to base $\overline{AC}$ is* $\boxed{3.585}$.

***Hint:*** *You may move point $D$. A height is the length of an altitude, which must be perpendicular to the line containing the chosen base.*

---

Geogebra link: https://tube.geogebra.org/m/kta9hbuf

**Problem 3** *In $\triangle ABC$ above, the height to base $\overline{AC}$ is* $\boxed{3.511}$.

***Hint:*** *You may move point $D$. A height is the length of an altitude, which must be perpendicular to the line containing the chosen base.*

---

Geogebra link: https://tube.geogebra.org/m/q32gyaud

**Problem 4** *In $\triangle ABC$ above, move point $D$ to make the following measurments:*

---

Learning outcomes:
Author(s): Brad Findell

(a) *When* $\overline{BD}$ *is a median,* $AD = \boxed{2.25}$.

(b) *When* $\overline{BD}$ *is a angle bisector,* $AD = \boxed{2.77}$.

(c) *When* $\overline{BD}$ *is a median,* $AD = \boxed{6.45}$.