Name _____ Class _____ Date _____

Reteaching 5-3

Concurrent Lines, Medians, and Altitudes

OBJECTIVE: Finding the point of concurrency of the altitudes of acute, obtuse, and right triangles

MATERIALS: Protractor, straightedge

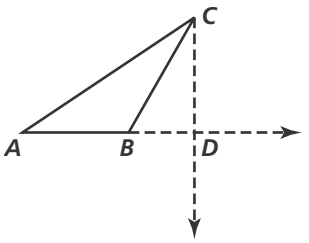
Example

Draw an obtuse triangle. Find the point of concurrency of the lines containing its altitudes.

Draw obtuse triangle ABC.

Extend side $\overline{AB}$.

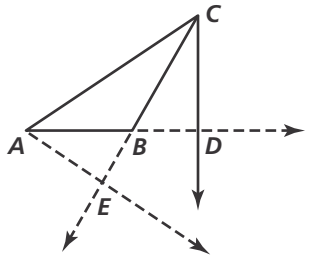
Move the straightedge on your protractor along $\overrightarrow{AB}$ until C lies directly under 90. Label the point lying directly under C on $\overrightarrow{AB}$ as point D.



Draw $\overrightarrow{CD}$, the ray containing the altitude $\overline{CD}$.

Extend side $\overline{BC}$.

Move the straightedge on your protractor along $\overrightarrow{CB}$ until point A lies directly under 90. Label the point lying directly under A on $\overrightarrow{CB}$ as point E.

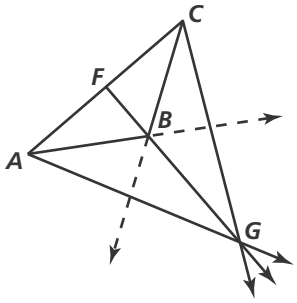


Draw $\overrightarrow{AE}$, the ray containing the altitude $\overline{AE}$.

Move the straightedge on your protractor along $\overline{AC}$ until B lies directly under 90. Label the point directly under B on $\overline{AC}$ as point F.

Draw $\overrightarrow{FB}$, the ray containing the altitude $\overline{BF}$.

The point of concurrency is G.



Exercises

Determine the point of concurrency.

1. Draw an acute triangle. Find the point of concurrency of the lines containing its altitudes.
2. Draw a right triangle. Find the point of concurrency of the lines containing its altitudes.