

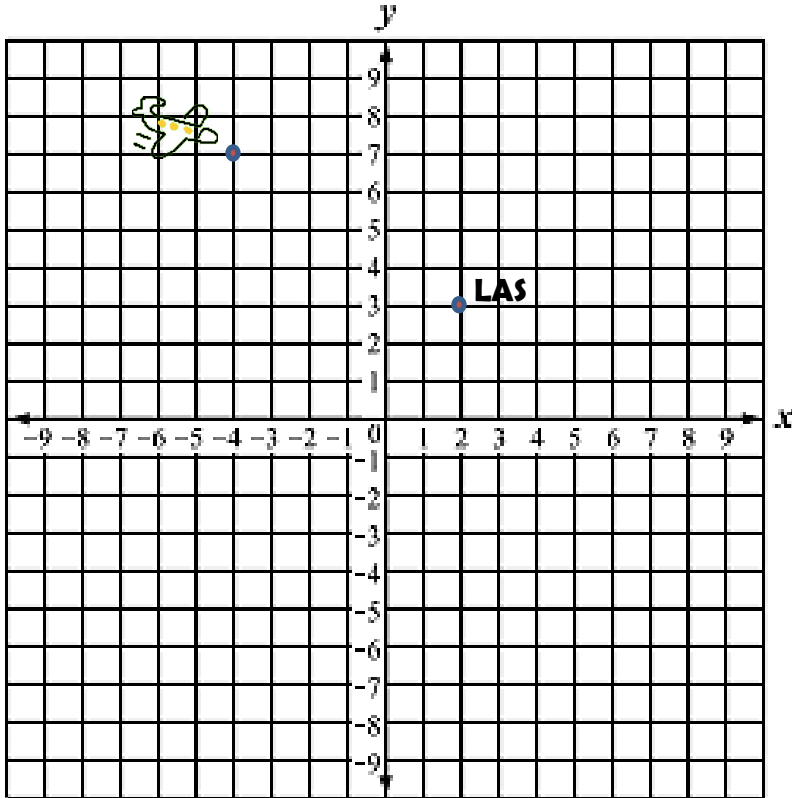
**Geometry – Unit 1 Task  
Construction Application**

G.CO.A.1

Name: \_\_\_\_\_!

Date: \_\_\_\_\_ Pd: \_\_\_\_\_

Air traffic control at McCarran International Airport (LAS) in Las Vegas, NV is located at a given point. It uses a radar system that sends out signals to determine the locations of airplanes. This system can detect planes within a circular region having a radius of 35 miles from LAS. Each grid unit represents 5 miles.



An airplane is heading directly toward LAS as pictured on the grid.

Use constructions to answer the following:

- 1) Can the plane be detected by the radar? Show all construction markings to provide mathematical evidence.
- 2) The air traffic controller instructs the pilot to begin circling the airport halfway between the airport and her current position. Perform the construction that will locate the position of the midpoint. Estimate the coordinates of the plane's location when the pilot begins to circle the airport. Show your work or explain your answer.

**Check your work using the distance and midpoint formulas:**

Distance Formula	Midpoint Formula
$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$	$\left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$