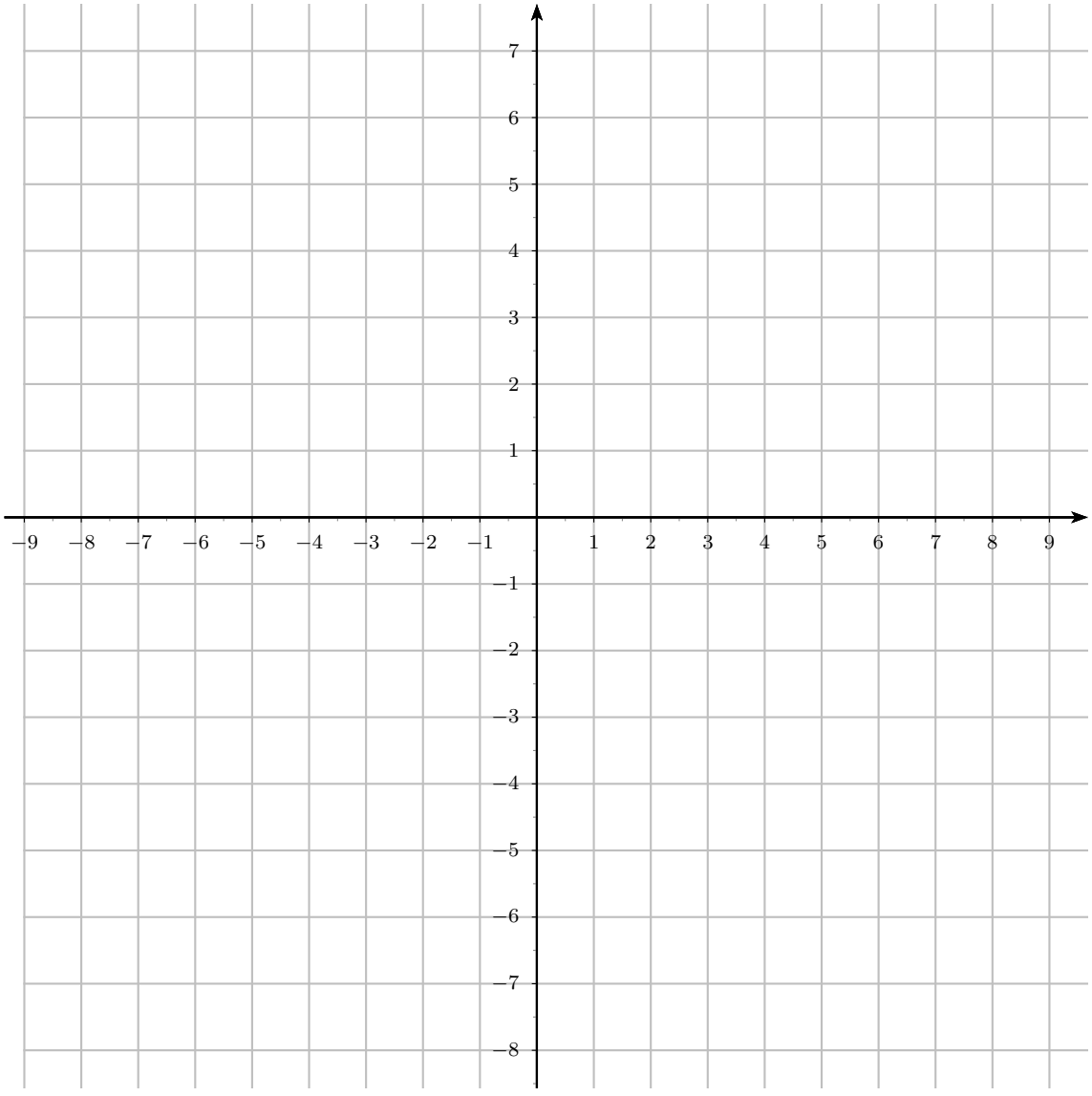
NAME

Math 70
Quiz 1

Determine how many solutions the following system of equations has. Graph both lines. If there is a unique solution use algebra to find it's coordinates.

$$\begin{cases} x + y = 6 \\ 5y + 3x = 20 \end{cases}$$



Someone leaves Sacramento at 9:00 am on the 5 freeway and travels at an average speed of 70 mph (lets a assume its a constant speed). You leave at 9:40 am on the same day and travel at an average speed of 83 mph. Will you ever catch up to the other person? If so, how long will it take and how many miles away from Sacramento will you be (assuming we are traveling in a straight line away)? Hint: first construct a system of equations for the situation. Then graph that system.