

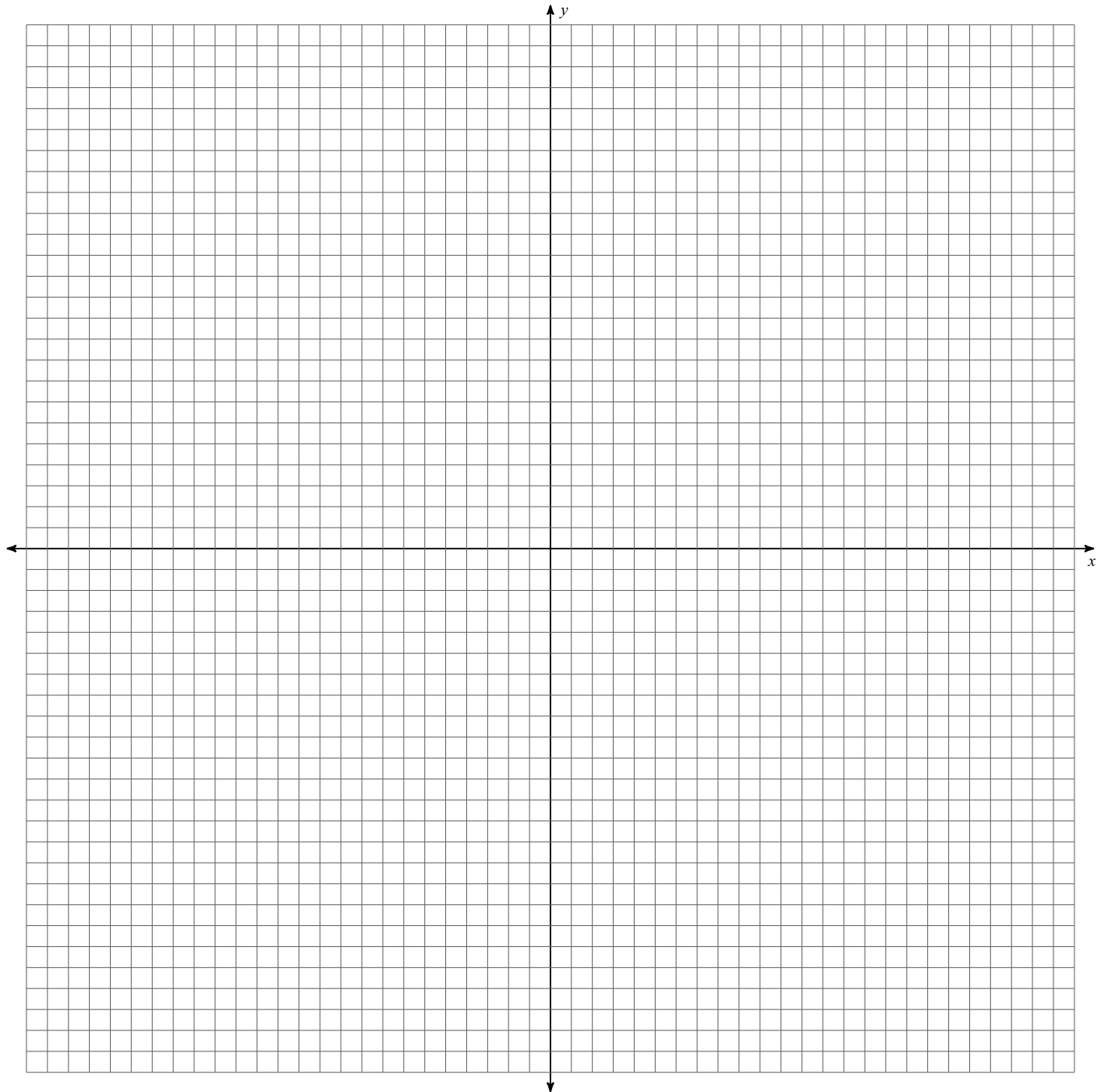


4) Two boats are traveling in the same direction. One boat starts 175 miles from its destination and travels at 25 miles per hour. The other boat is 50 miles from its destination after 5 hours and reaches its destination 2 hours later. When are the boats the same distance from their destination? What is that distance?

5) The senior classes at High School A and High School B planned separate trips to Yellowstone National Park. The senior class at High School A rented and filled 10 vans and 2 buses with 194 students. High School B rented and filled 7 vans and 7 buses with 315 students. Every van had the same number of students in it as did the buses. Find the number of students in each van and in each bus.

**Write two equations to represent the situation. Graph the lines represented by the equation. Show a table of values for each line you draw. Explain the meaning of the  $x$  and  $y$  axes. Then solve the system using both substitution and elimination. Use different colored highlighters to highlight areas where you see commonalities in between representations.**

- 6) Two buses are traveling toward each other. Bus 1 is 45 miles from the station and traveling north at 65 miles per hour. Bus 2 is 425 miles from the station and traveling south at 60 miles per hour. When will the two buses pass each other? What will be their distance from the station at that time?



**Solve each system by elimination.**

$$\begin{aligned} 7) \quad & 6x + 9y = -6 \\ & 3x - 9y = -30 \end{aligned}$$

$$\begin{aligned} 8) \quad & -3x + 6y = -24 \\ & -2x + y = -16 \end{aligned}$$

$$\begin{aligned} 9) \quad & -28x - 42y = -18 \\ & -32x - 48y = -16 \end{aligned}$$

$$\begin{aligned} 10) \quad & 4x - 9y = -24 \\ & -3x - 6y = 18 \end{aligned}$$