midpoint $= \left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$

Name Schlansky
Mr. Schlansky

Date _____
Geometry

Midpoint

Find the midpoint of the segment formed by the following two points.

1. (5,1) and (7,5) $\left(\frac{5+7}{2}, \frac{1+5}{2}\right) \rightarrow \left(\frac{12}{2}, \frac{6}{2}\right) \rightarrow (6,3)$

2. (9,1) and (1,-5) $\left(\frac{9+1}{2}, \frac{1+-5}{2}\right) \rightarrow \left(\frac{10}{2}, \frac{-4}{2}\right) \rightarrow (5,-2)$

3. (2,5) and (-2,7) $\left(\frac{2+-2}{2}, \frac{5+7}{2}\right) \rightarrow \left(\frac{0}{2}, \frac{12}{2}\right) \rightarrow (0,6)$

4. (3,2) and (9,0) $\left(\frac{3+9}{2}, \frac{2+0}{2}\right) \rightarrow \left(\frac{12}{2}, \frac{2}{2}\right) \rightarrow (6,1)$

5. (-4,1) and (-4, 9) $\left(\frac{-4+-4}{2}, \frac{1+9}{2}\right) \rightarrow \left(\frac{-8}{2}, \frac{10}{2}\right) \rightarrow (-4,5)$

6. (10,-1) and (2, 4) $\left(\frac{10+2}{2}, \frac{-1+4}{2}\right) \rightarrow \left(\frac{12}{2}, \frac{3}{2}\right) \rightarrow (6,1.5)$

7. (-2,7) and (3, 5) $\left(\frac{-2+3}{2}, \frac{7+5}{2}\right) \rightarrow \left(\frac{1}{2}, \frac{12}{2}\right) \rightarrow (.5,6)$

8. (9,-1) and (-1, 5) $\left(\frac{9+-1}{2}, \frac{-1+5}{2}\right) \rightarrow \left(\frac{8}{2}, \frac{4}{2}\right) \rightarrow (4,2)$

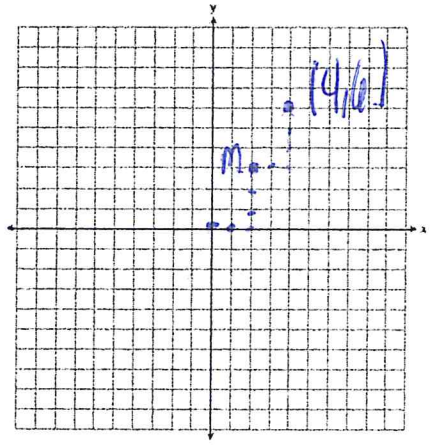
9. (-6,-3) and (-2, 1) $\left(\frac{-6+-2}{2}, \frac{-3+1}{2}\right) \rightarrow \left(\frac{-8}{2}, \frac{-2}{2}\right) \rightarrow (-4,-1)$

10. (-13,6) and (-1, 1) $\left(\frac{-13+-1}{2}, \frac{6+1}{2}\right) \rightarrow \left(\frac{-14}{2}, \frac{7}{2}\right) \rightarrow (-7,3.5)$

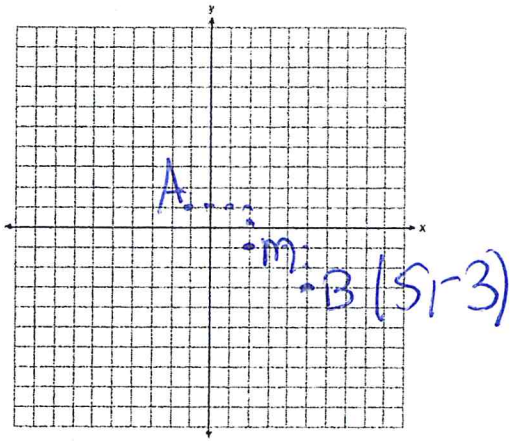
11. (-4,7) and (-2, 6) $\left(\frac{-4+-2}{2}, \frac{7+6}{2}\right) \rightarrow \left(\frac{-6}{2}, \frac{13}{2}\right) \rightarrow (-3,6.5)$

12. (9,-2) and (-3, 8) $\left(\frac{9+-3}{2}, \frac{-2+8}{2}\right) \rightarrow \left(\frac{6}{2}, \frac{6}{2}\right) \rightarrow (3,3)$

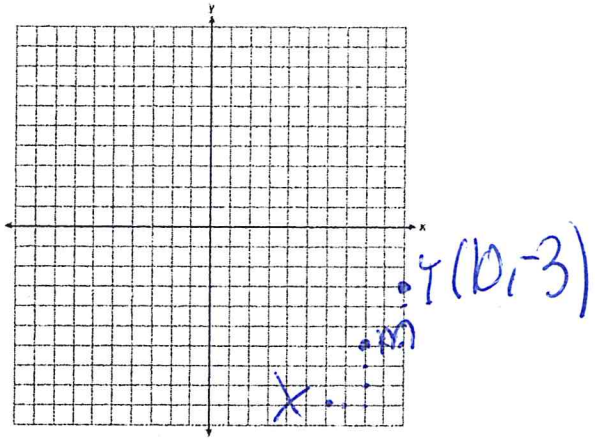
13. The midpoint of a line segment is (2,3). If one endpoint of the segment is (0,0), what is the other endpoint?



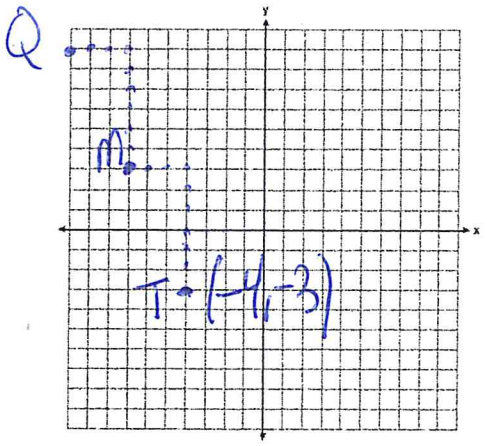
14. The midpoint M of $\overline{AB}$ is (2,-1). If the coordinates of A are (-1, 1), what are the coordinates of B?



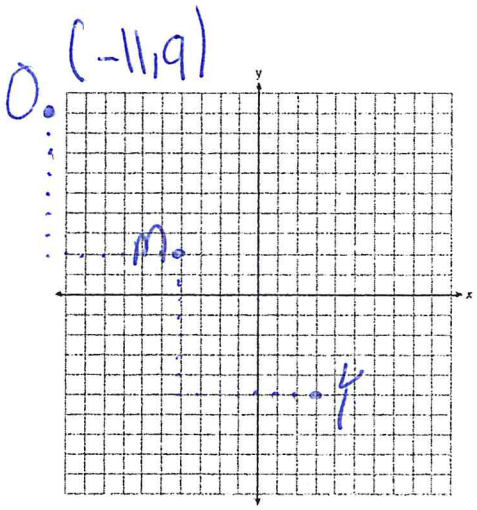
15. The midpoint M of $\overline{XY}$ is (8,-6). If the coordinates of X are (6, -9), what are the coordinates of Y?



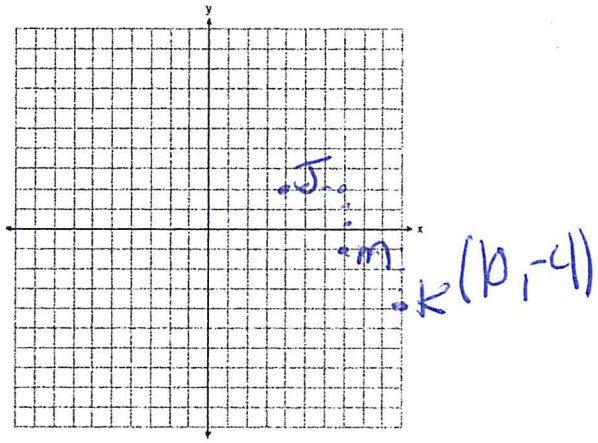
16. The midpoint M of $\overline{QT}$ is (-7,3). If the coordinates of Q are (-10, 9), what are the coordinates of T?



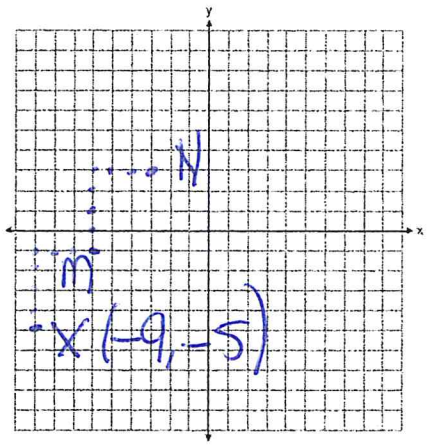
17. The midpoint M of $\overline{YO}$ is (-4,2). If the coordinates of Y are (3, -5), what are the coordinates of O?



18. The midpoint M of $\overline{JK}$ is (7,-1). If the coordinates of J are (4,2), what are the coordinates of K?



19. The midpoint M of $\overline{XN}$ is (-6,-1). If the coordinates of N are (-3, 3), what are the coordinates of X?



20. The midpoint M of $\overline{PL}$ is (8,-1). If the coordinates of P are (9, -4), what are the coordinates of L?