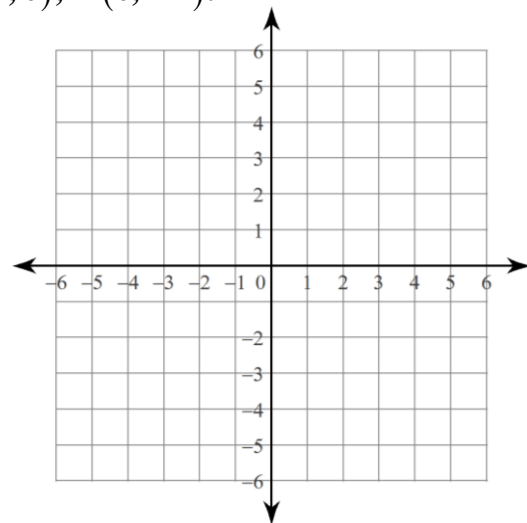


Name \_\_\_\_\_ Hour \_\_\_\_\_

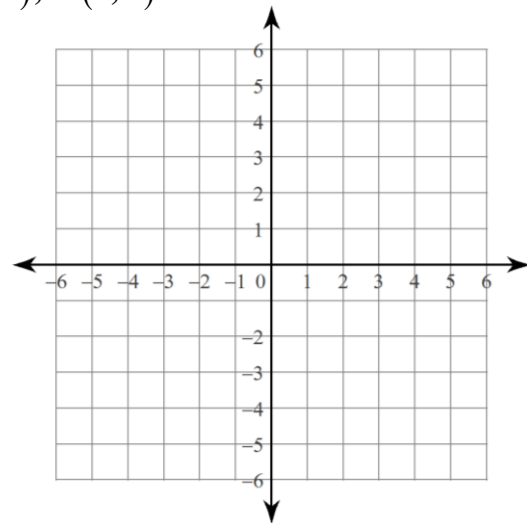
The vertices of quadrilateral  $ABCD$  are  $A(-3, -3)$ ,  $B(-1, 1)$ ,  $C(2, 0)$ ,  $D(0, -4)$ .

- Graph quadrilateral  $ABCD$ .
- Find the slope of  $\overline{AB}$ .
- Find the slope of  $\overline{CD}$ .
- Find the length of  $\overline{AB}$ .
- Find the length of  $\overline{CD}$ .
- Is quadrilateral  $ABCD$  a parallelogram? Use your work from problems 1–5 to justify your answer (explain why).



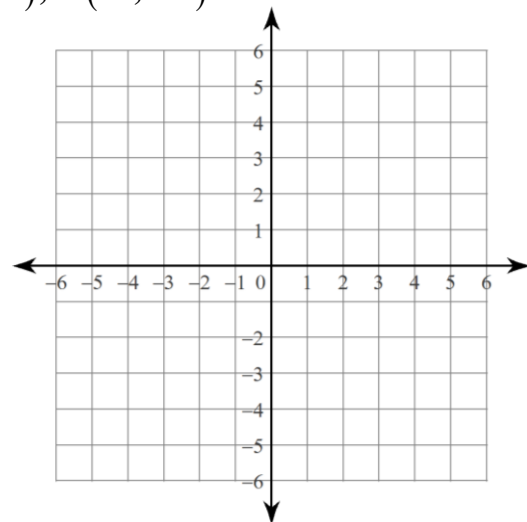
The vertices of quadrilateral  $ABCD$  are  $A(5, 1)$ ,  $B(2, -3)$ ,  $C(-1, 1)$ ,  $D(2, 4)$ .

- Graph quadrilateral  $ABCD$ .
- Find the length of  $\overline{AB}$ .
- Find the length of  $\overline{CD}$ .
- Find the length of  $\overline{AD}$ .
- Find the length of  $\overline{BC}$ .
- Is quadrilateral  $ABCD$  a parallelogram? Use your work from problems 7–11 to justify your answer (explain why).



The vertices of quadrilateral  $ABCD$  are  $A(-3, 4)$ ,  $B(4, 3)$ ,  $C(3, -4)$ ,  $D(-4, -2)$ .

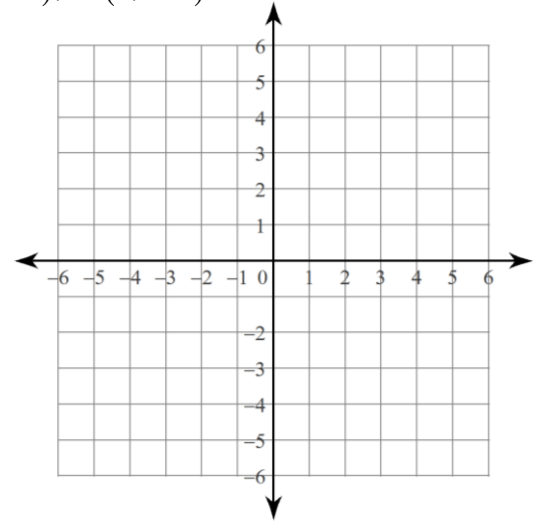
- Graph quadrilateral  $ABCD$ .
- Find the slope of  $\overline{AB}$ .
- Find the slope of  $\overline{CD}$ .
- Find the slope of  $\overline{AD}$ .
- Find the slope of  $\overline{BC}$ .
- Is quadrilateral  $ABCD$  a parallelogram? Use your work from problems 13–17 to justify your answer (explain why).



# Parallelograms #2

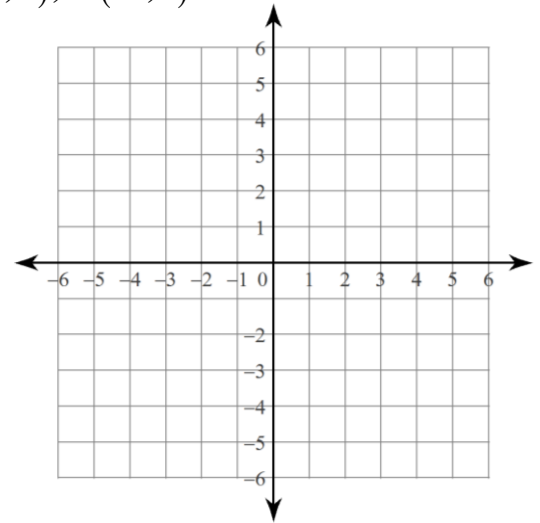
The vertices of quadrilateral  $ABCD$  are  $A(4, 4)$ ,  $B(-3, 1)$ ,  $C(-3, -4)$ ,  $D(4, -2)$ .

19. Graph quadrilateral  $ABCD$ .
20. Find the slope of  $\overline{AB}$ .                      21. Find the slope of  $\overline{CD}$ .
22. Find the length of  $\overline{AB}$ .                      23. Find the length of  $\overline{CD}$ .
24. Is quadrilateral  $ABCD$  a parallelogram? Use your work from problems 19–23 to justify your answer (explain why).



The vertices of quadrilateral  $ABCD$  are  $A(-2, -1)$ ,  $B(1, 1)$ ,  $C(-2, 3)$ ,  $D(-5, 1)$ .

25. Graph quadrilateral  $ABCD$ .
26. Find the length of  $\overline{AB}$ .                      27. Find the length of  $\overline{CD}$ .
28. Find the length of  $\overline{AD}$ .                      29. Find the length of  $\overline{BC}$ .
30. Is quadrilateral  $ABCD$  a parallelogram? Use your work from problems 25–29 to justify your answer (explain why).



The vertices of quadrilateral  $ABCD$  are  $A(0, 4)$ ,  $B(2, -2)$ ,  $C(-1, -3)$ ,  $D(-3, 3)$ .

31. Graph quadrilateral  $ABCD$ .
32. Find the slope of  $\overline{AB}$ .                      33. Find the slope of  $\overline{CD}$ .
34. Find the slope of  $\overline{AD}$ .                      35. Find the slope of  $\overline{BC}$ .
36. Is quadrilateral  $ABCD$  a parallelogram? Use your work from problems 31–35 to justify your answer (explain why).

