Name: **Date:**

Practice: Using Coordinates to Prove Geometric Theorems with Slope and Distance

A

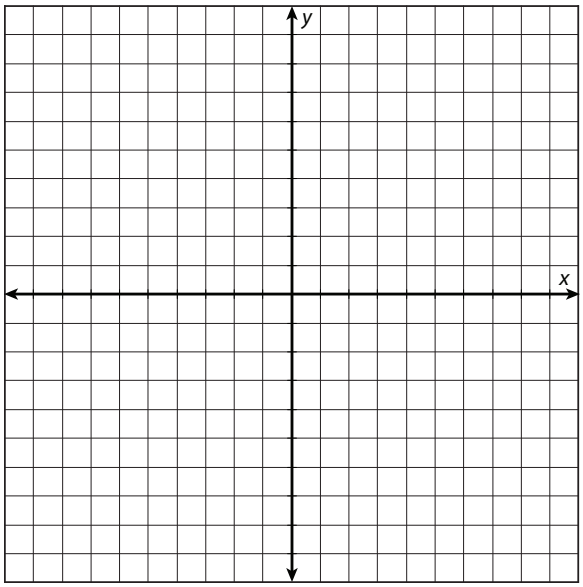
Use the distance formula to calculate the distance between the points indicated.

1. (–1, 1) and (4, 11)

2. (–3, –2) and (6, –1)

A right triangle has a 90˚ angle made up of two perpendicular sides. Graph each triangle and then determine if each one is a right triangle. Use the slope formula and/or distance formula to justify your answer.

3. *A* (–6, 2), *B* (–2, –2), and *C* (2, 1)



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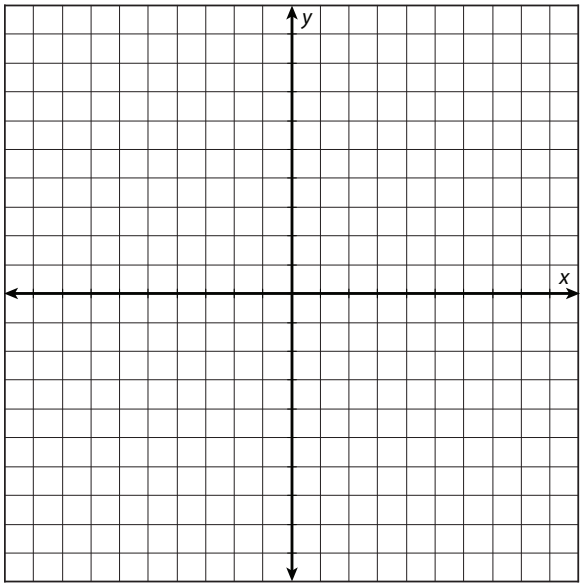
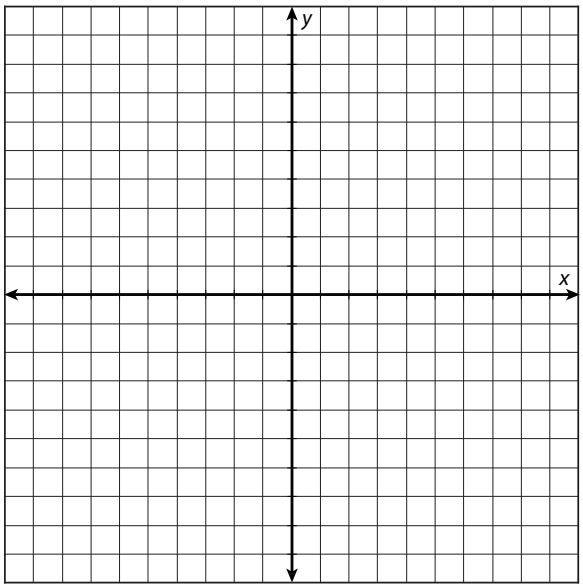
4. *A* (–3, 2), *B* (1, 4), and *C* (3, 0)



A parallelogram is a quadrilateral with opposite sides parallel. Graph each quadrilateral and then determine if each one is a parallelogram. Use the slope formula and/or distance formula to justify your answer.

5. *A* (–2, –1), *B* (–1, 3), *C* (4, 3), and *D* (3, –1)



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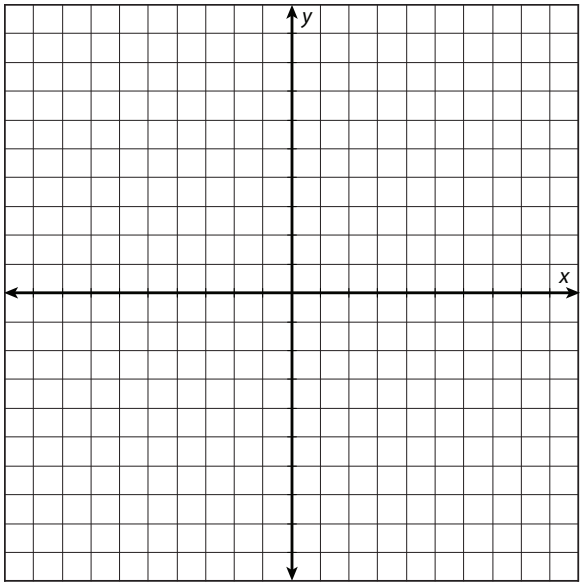
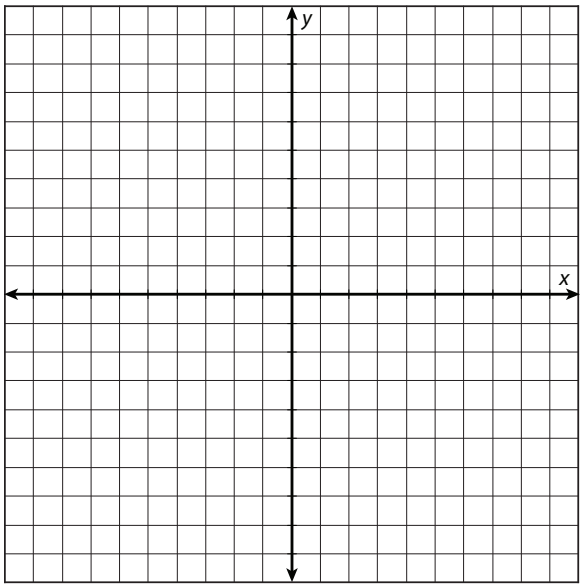
6. *A* (–2, 2), *B* (1, 8), *C* (4, 5), and *D* (3, –2)



A rectangle is a parallelogram with opposite sides that are congruent and consecutive sides that are perpendicular. Graph each quadrilateral and then determine if each one is a rectangle. Use the slope formula and/or distance formula to justify your answer.

7. *A* (–2, –1), *B* (–3, 1), *C* (1, 3), and *D* (2, 1)



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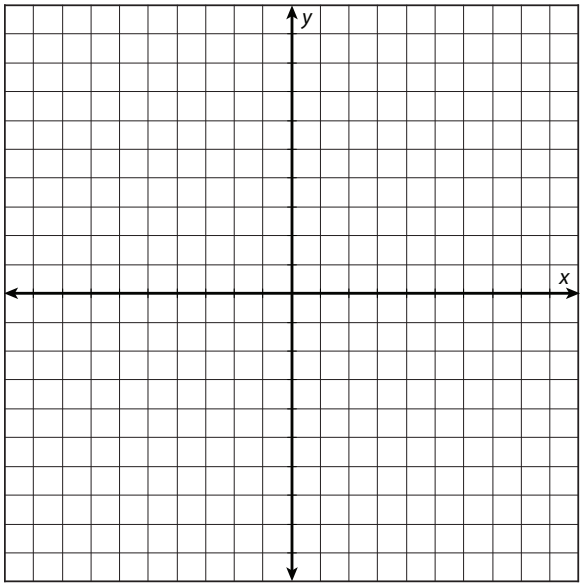
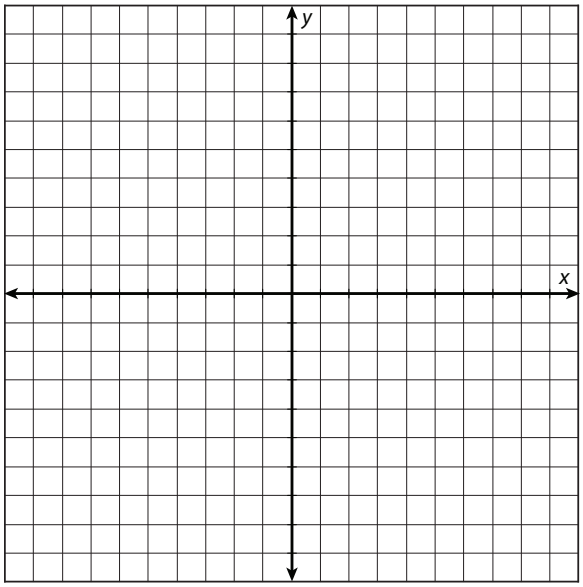
8. *A* (1, –3), *B* (0, 0), *C* (4, 4), and *D* (5, 1)



A square is a parallelogram with four congruent sides and four right angles. Graph each quadrilateral and then determine if each one is a square. Use the slope formula and/or distance formula to justify your answer.

9. *A* (–2, 1), *B* (1, 3), *C* (4, 1), and *D* (1, –1)



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10. A (–1, 4), B (0, 6), C (2, 5), and D (1, 3)