Name: **Date:**

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

B

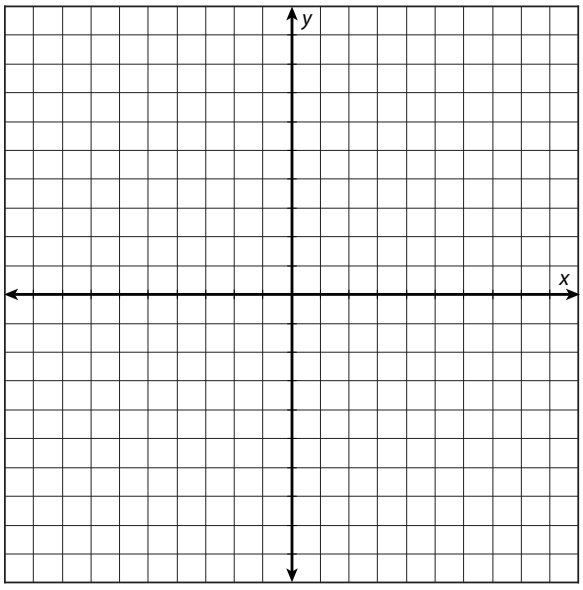
Use the distance formula to calculate the distance between the points indicated.

1. (2, 3) and (–2, 5)

2. (7, –2) and (8, –9)

A right triangle has 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* (0, –1), *B* (1, 4), and *C* (3, 1)



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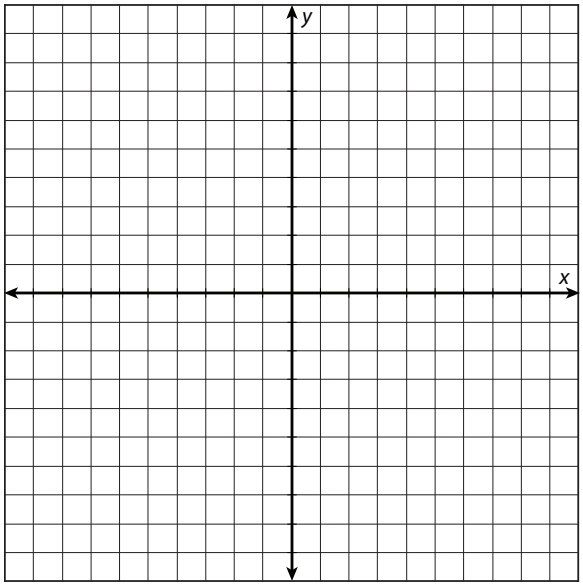
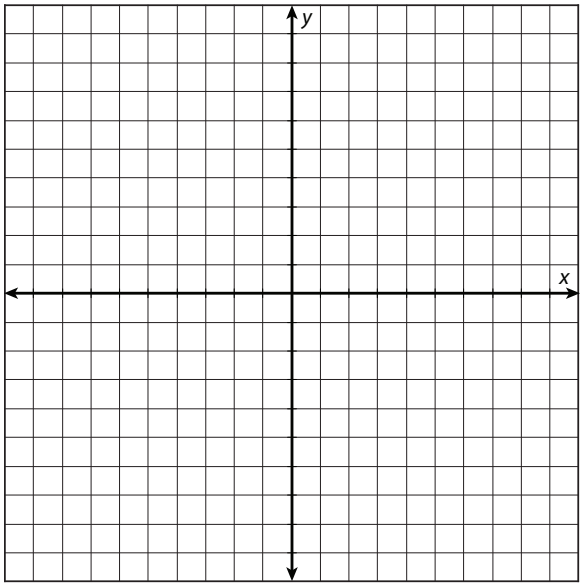
4. A (–3, –3), B (4, 1), and C (3, –4)



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 (0, 0), B (1, 5), C (4, 6), and D (3, 0)



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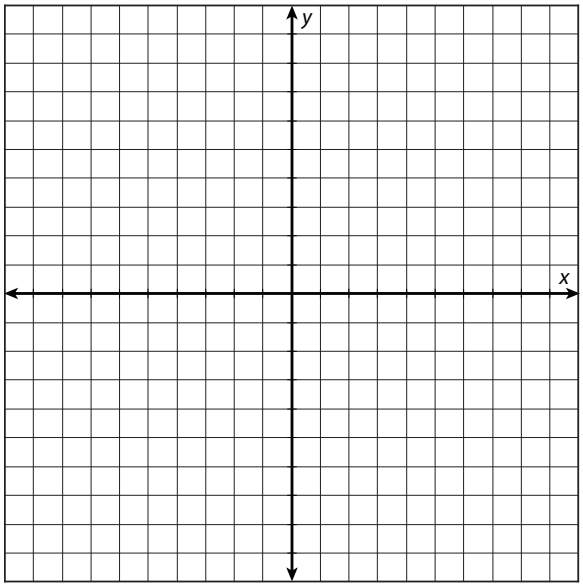
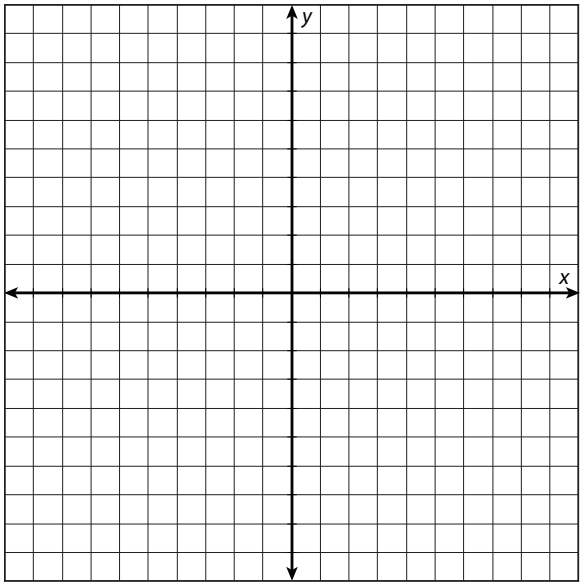
6. A (–1, 1), B (1, 3), C (4, –2), and D (2, –4)



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 (–3, –4), B (–1, –2), C (4, –7), and D (2, –9)



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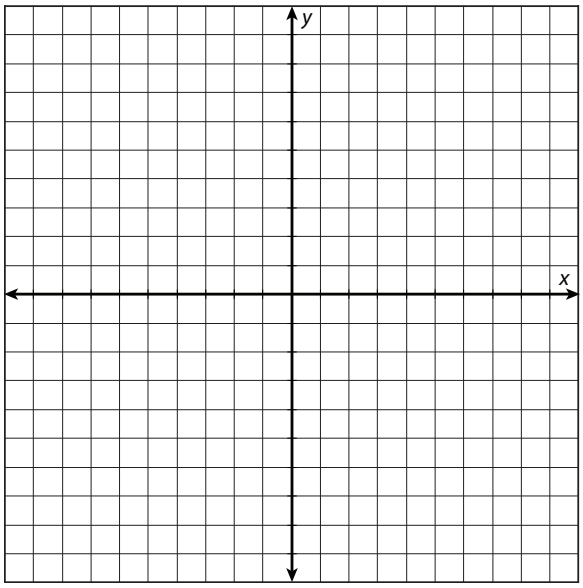
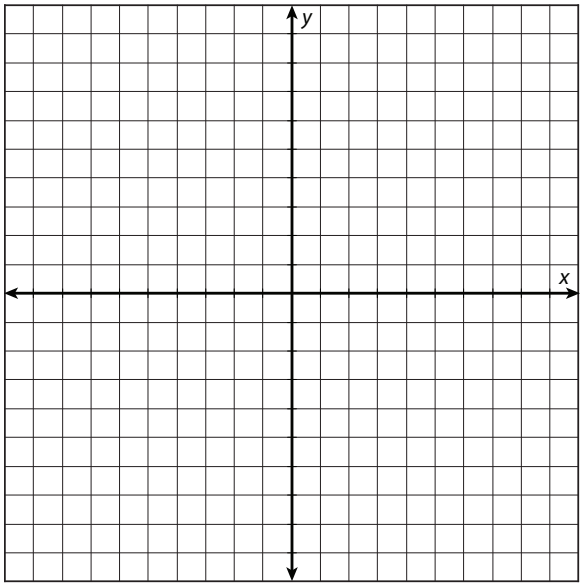
8. A (–2, –3), B (–4, 2), C (6, 6), and D (3, –1)



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



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