

Connect-the-Dot Graph Art

Students practice coordinate graphing by plotting ordered pairs to reveal mystery pictures.

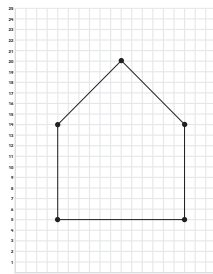


Materials

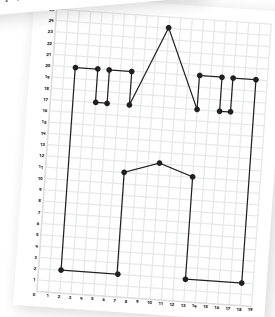
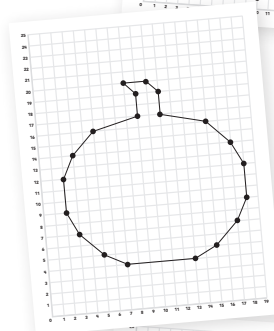
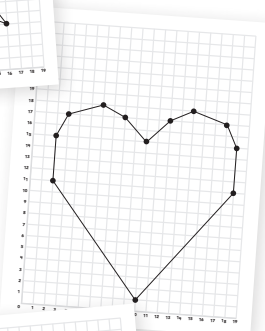
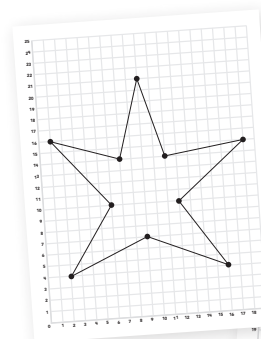
- * coordinate pairs lists, page 60
- * 1-cm grid paper, page 61
- * pencils
- * rulers
- * crayons, colored pencils, or markers

1. Introduce or review coordinate graphing. Copy a sheet of grid paper onto transparency film for use on an overhead or scan for an interactive whiteboard. Model how to find and mark a point on the graph using an ordered pair. Then plot a second ordered pair, and use a straightedge to connect the two points.

2. Demonstrate how to create a simple picture, such as the outline of a house, by plotting a set of six ordered pairs as follows: $(4, 5)$, $(4, 14)$, $(10, 20)$, $(16, 14)$, $(16, 5)$, $(4, 5)$. Then connect the dots in the same order as you made them.



3. Give students a copy of the coordinate pairs list page and sheets of grid paper. Have them plot and connect points (in the order they make them) to see a mystery picture emerge. Then invite students to color and add details to their graph art pictures using crayons or markers.



Explore More

Challenge students to create connect-the-dot pictures for classmates to solve. They first sketch a simple picture on grid paper, then record the list of ordered pairs needed to make it. Students then swap lists with a classmate and plot each other's pictures.

Coordinate Pairs Lists

1. (2, 4)
2. (6, 10)
3. (1, 16)
4. (7, 14)
5. (9, 21)
6. (11, 14)
7. (18, 15)
8. (12, 10)
9. (16, 4)
10. (9, 7)
11. (2, 4)

1. (10, 1)
2. (2, 11)
3. (2, 15)
4. (3, 17)
5. (6, 18)
6. (8, 17)
7. (10, 15)
8. (12, 17)
9. (14, 18)
10. (17, 17)
11. (18, 15)
12. (18, 11)
13. (10, 1)

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|-------------|--------------|
| 1. (10, 20) | 12. (5, 5) |
| 2. (11, 19) | 13. (3, 7) |
| 3. (11, 17) | 14. (2, 9) |
| 4. (15, 16) | 15. (2, 12) |
| 5. (17, 14) | 16. (3, 14) |
| 6. (18, 12) | 17. (5, 16) |
| 7. (18, 9) | 18. (9, 17) |
| 8. (17, 7) | 19. (9, 19) |
| 9. (15, 5) | 20. (8, 20) |
| 10. (13, 4) | 21. (10, 20) |
| 11. (7, 4) | |

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|--------------|--------------|
| 1. (2, 2) | 13. (15, 17) |
| 2. (2, 20) | 14. (16, 17) |
| 3. (4, 20) | 15. (16, 20) |
| 4. (4, 17) | 16. (18, 20) |
| 5. (5, 17) | 17. (18, 2) |
| 6. (5, 20) | 18. (13, 2) |
| 7. (7, 20) | 19. (13, 11) |
| 8. (7, 17) | 20. (10, 12) |
| 9. (10, 24) | 21. (7, 11) |
| 10. (13, 17) | 22. (7, 2) |
| 11. (13, 20) | 23. (2, 2) |
| 12. (15, 20) | |

