

insights you found. Explain your conclusions and justify your statements. Remember to include both a table and a complete graph of your parabola with all special points carefully labeled. Be thorough and complete.

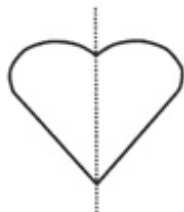


MATH NOTES

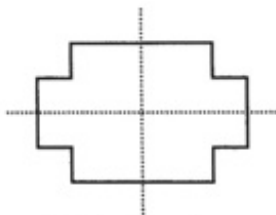
METHODS AND MEANINGS

Lines of Symmetry

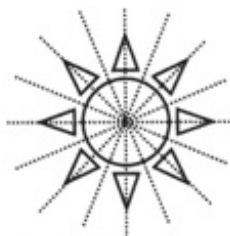
When a graph or picture can be folded so that both sides of the fold will perfectly match, it is said to have **reflective symmetry**. The line where the fold would be is called the **line of symmetry**. Some shapes have more than one line of symmetry. See the examples below.



This shape has one line of symmetry.



This shape has two lines of symmetry.



This shape has eight lines of symmetry.



This graph has two lines of symmetry.

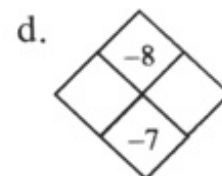
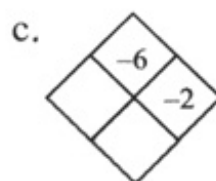
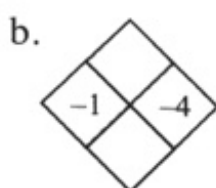
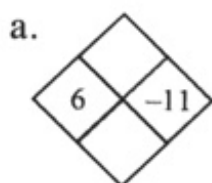
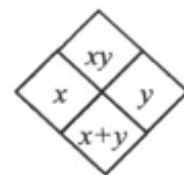


This shape has no lines of symmetry.



- 1-25. Freda Function has another quadratic function for you to investigate! Graph the equation $y = x^2 + 3$ and then answer the questions from problem 1-23.

- 1-26. Copy these Diamond Problems and use the pattern you discovered earlier, shown at right, to complete each of them. Some of these may be challenging!



- 1-27. Copy the figure at right onto your paper. Then draw any lines of symmetry.



- 1-28. Solve the equations below for x and check your solutions.

a. $-3 + 2x = -x + 6$

b. $5 - 3x = x + 1$

c. $-2x = 4x + 9$

d. $4x + 3 = x$

- 1-29. Mr. Guo is thinking of a number. When he takes the absolute value of his number, he gets 15. What could his number be? Is there more than one possible answer?