Name _____ Date _____

LESSON 1.6

Challenge Practice

For use with pages 42–47

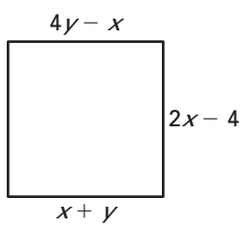
In Exercises 1–4, draw a figure with the indicated condition.

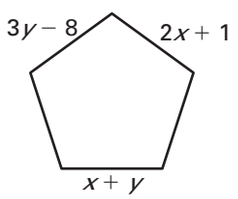
1. A hexagon with exactly one line of symmetry
2. A hexagon with exactly two lines of symmetry
3. An octagon with exactly two lines of symmetry
4. A pentagon with no lines of symmetry

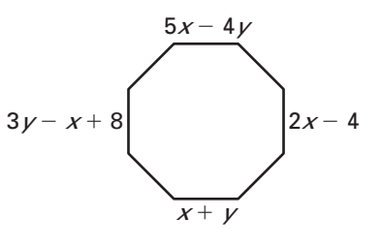
In Exercises 5 and 6, plot the points in a coordinate plane. Then determine what type of polygon the points form. Is the polygon equilateral? *Justify* your answer.

5. $A(3, 9)$, $B(6, 9)$, $C(8, 7)$, $D(8, 4)$, $E(5, 4)$, $F(3, 6)$
6. $A(6, 6)$, $B(9, 4)$, $C(8, 1)$, $D(4, 1)$, $E(3, 4)$

In Exercises 7–9, the figure shown is a regular polygon. Find the values of x and y.

7. 

8. 

9. 

10. Show that the diagonals of the quadrilateral in the figure intersect at their midpoints.