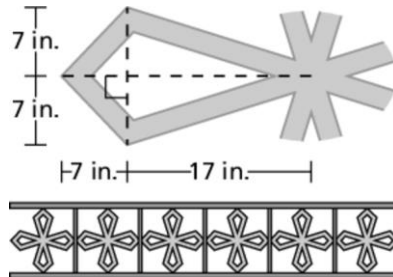


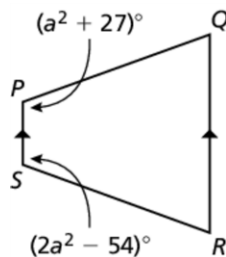
7.5 Enrichment and Extension

Properties of Trapezoids and Kites

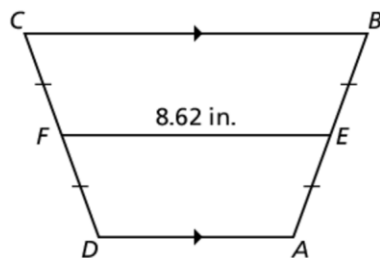
- Each square section in an iron railing contains four small kites. The figure shows the dimensions of one kite. What length of iron is needed to outline one small kite? How much iron is needed to outline one complete section, including the square?



- Find the value of a in the figure to the right so that $PQRS$ is isosceles.



- The perimeter of an isosceles trapezoid $ABCD$ is 27.4 inches. If $BC = 2(AB)$, find AD , AB , BC , and CD .



In Exercises 4 and 5, the given coordinates represent three vertices of an isosceles trapezoid. Write the coordinates of the point that could be the fourth vertex.

- $(a, b), (a, -b), (a + 3, b)$ 5. $(a, b), (a, b - c), (a - c, b - 2c)$
- One base of a non-isosceles trapezoid has the vertices $(x, y + z)$ and $(x + z, y + 2z)$. A third vertex is the point (x, y) . Describe the set of points that could be the fourth vertex.
- If the coordinates $(0, 0), (2, 5),$ and $(5, 2)$ represent three vertices of a convex kite, describe the coordinates of each point that could be the fourth vertex.