

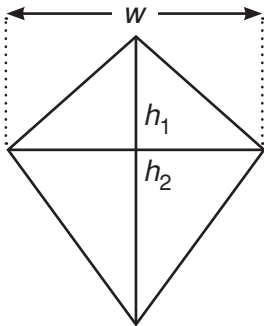
CHAPTER
8

Project
High Fliers

Activity 1: Let's Go Fly a Kite *Use with Lesson 8-2*

Kite flying is a fascinating sport and hobby. Kites come in all different shapes, colors, and sizes. You can buy kites in hobby and toy stores, or you can make them yourself. View the kite plans below. Write an expression for the area of each kite. Write your answer in factored form.

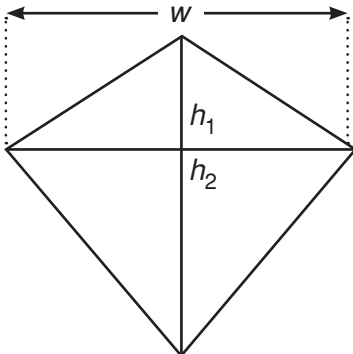
1. Diamond Kite



$$h_1 = w - 55$$

$$h_2 = w - 15$$

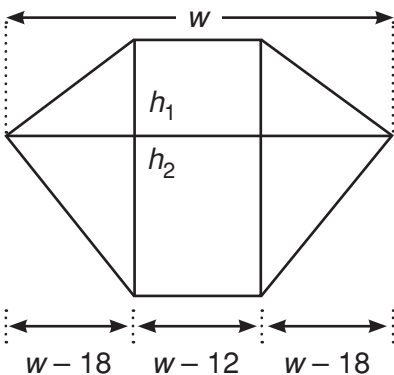
2. Eddy Kite



$$h_1 = w - 85$$

$$h_2 = w - 15$$

3. Sled Kite



$$h_1 = w - 19$$

$$h_2 = w - 13$$

4. Use one of the kite plans above to design your own kite. Pick a width. Then calculate the dimensions and area of your kite.

CHAPTER 8 Project
8 High Fliers continued

Activity 2: Flag Sizes Use with Lesson 8-3

The area and the height for a country's flag are given below. Find the width (or length) of the flag.

1. France



Area = $x^2 + 75x + 1250$
 Height = $x + 25$

5. Germany



Area = $x^2 + 30x + 125$
 Height = $x + 5$

2. Switzerland



Area = $x^2 + 80x + 160$
 Height = $x + 40$

6. Ireland



Area = $x^2 + 130x + 1725$
 Height = $x + 15$

3. Belgium



Area = $x^2 + 180x + 8000$
 Height = $x + 80$

7. Monaco



Area = $x^2 + 54x + 704$
 Height = $x + 22$

4. Estonia



Area = $x^2 + 60x + 500$
 Height = $x + 10$

8. Micronesia



Area = $x^2 + 100x + 2100$
 Height = $x + 30$

9. Are any of the flags above square? Explain how you know.

10. Design a flag that has a height to width proportion of 2:3. The area will be represented by the expression $x^2 + 18x + 72 \text{ in}^2$. Give the dimensions of your flag.
