Walkway

Pre-Activity

Often it is useful in finding the area of odd-looking shapes to think of them as made up of simpler shapes such as rectangles and triangles. For example, the shape below is called a parallelogram.

The area of a parallelogram can be thought of as being made up of several pieces as follows:

You can now use what you know about finding the area of a rectangle and the area of a triangle to find the area of the parallelogram.

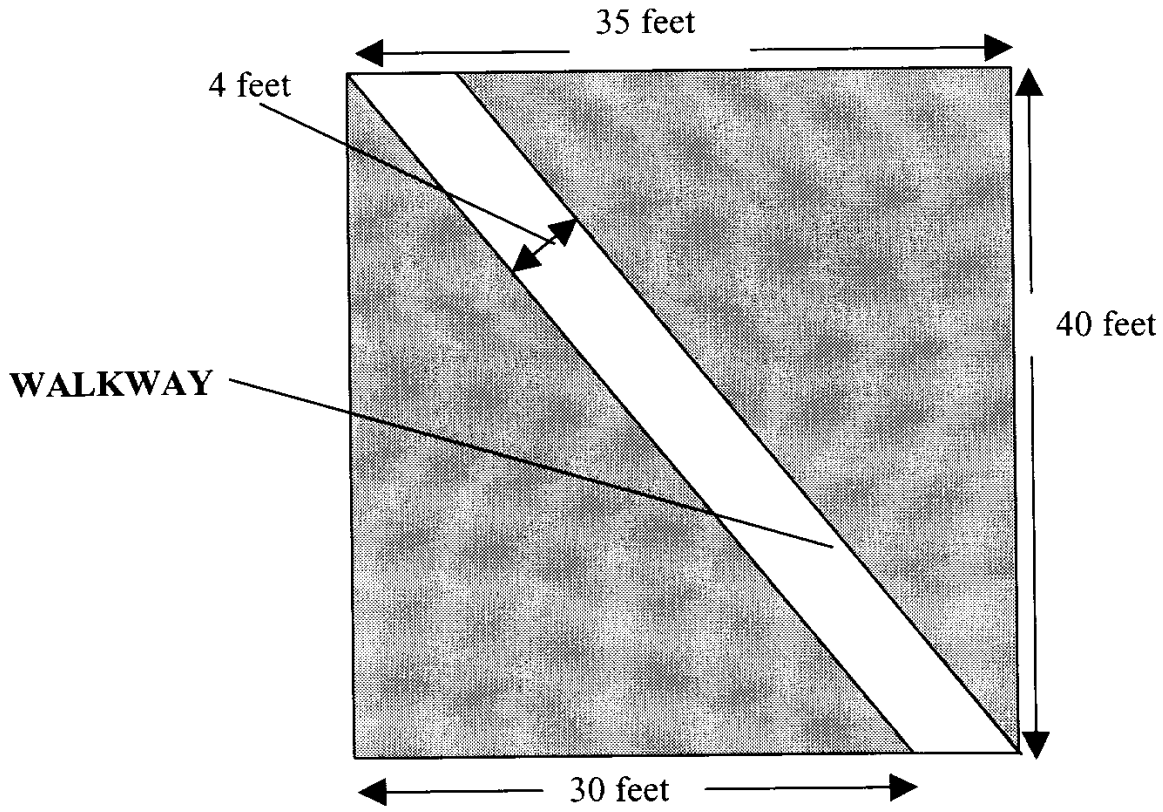
You can also think of rearranging these pieces to make a rectangle, as follows:

You can now use what you know about finding the area of a rectangle to find the area of the parallelogram. How would you do it?

Task

The school administration has found that students like to take a shortcut across a grassy field that is 35 feet x 40 feet. They have decided to pave a 4 foot wide walkway along the shortcut the students take.

Here is a picture of the field and the proposed walkway.



Determine the total area of the walkway. Describe your strategy and show all your calculations.