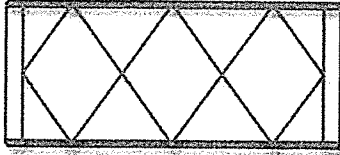

Performance Task

Lattice Fence

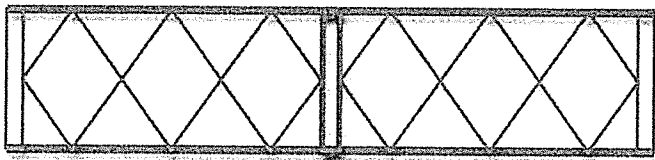
Nicole is designing a fence. She designs the first section of the fence. One section of the fence contains two rectangular posts on the left and right sides, and a top and bottom rail.



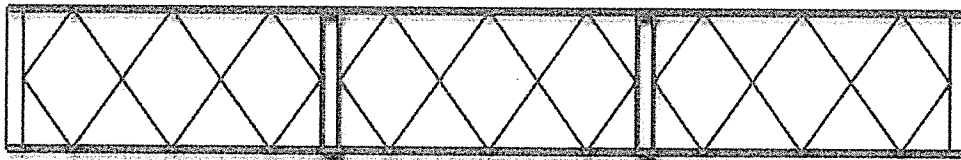
One section of the fence

1. Describe the polygons that are contained within a section of fence. Be sure to include the numbers of each polygon and their locations in the fence.

Nicole designs the next two sections of the fence.



Two sections of the fence



Three sections of the fence

2. How many rhombuses are contained in three sections of fence? _____
3. How many right triangles are contained in five sections of fence? _____
Show how you figured it out?

4. Nicole looks out and sees 48 right triangles in the fence that has been built. How many equilateral triangles would also be in the fence? _____
Show how you figure out your answer.

5. A long length of fence contains 50 rectangular posts. How many sections of fence are there? _____
How do you know?

6. How could you find the number of rhombuses if you knew the number of equilateral triangles contained in a long length of fence? Explain.

Rainfall

This problem gives you the chance to:

- interpret decimal notation in a practical context
 - recognize and explain a misconception
-

Weather forecasters classify rainfall as light, moderate, or heavy, according to the following guidelines:

Classification	Rainfall per hour
Light	0.1 inch or less
Moderate	0.11 to 0.30 inch
Heavy	More than 0.30 inch

1. Classify each of the following rates of rainfall as “light,” “moderate,” or “heavy.”

0.03 inch per hour _____ 0.3 inch per hour _____

2. It rained for 3 days at a “moderate” rate. For each day, give a different example of what the average rainfall per hour could have been.

Day 1 _____ Day 2 _____

Day 3 _____

3. On one afternoon, the rain fell at a rate of 0.4 inch per hour.

Betty said, “*I cannot tell how to classify 0.4 inch per hour. Four is greater than 1 and less than 11.*”

Write a brief note to Betty that:

- points out what mistake she made; and
- helps her **understand** how to classify 0.4 inch of rain.

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