

Surrounded and Covered

Level D

Tex has a home on the range. He wants to build a rectangular corral for his horses. He only has 170 feet of fencing.



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What size of corral should be built to make sure the horses have the most room? List the dimensions and area. Justify how you know the corral is as large as possible. Explain your reasoning.

A year later, Tex needs a second corral. This time he has 240 feet of fencing. He picks out a new location and realizes that he does not need to make the corral a rectangle. He designs a corral in the shape of a hexagon and still wants to maximize the area. What are the lengths of the sides and what is the area of the corral? Explain how you found your answer.

Tex thinks that maybe another shape would make an even larger area for his corral. Determine what the shape should be and its area and dimensions. Justify your answer using mathematical reasoning.

