



Arranging School Supplies

Mrs. Carter is organizing some of her school supplies that came in square boxes. She is trying to figure out the best way to arrange them. She knows she wants everything to be arranged in a single layer as a rectangle, but she is not sure how to arrange the boxes to make the rectangles. Can you help Mrs. Carter? Solve each problem below. Show your work using numbers, sketches, or words.

- 1** Mrs. Carter has 18 square boxes of tacks.
 - a** How many different rectangles can she make with the 18 boxes of tacks? What are the dimensions of each of the different rectangles?

 - b** How do you know that you found all of the possible rectangles?

- 2** Mrs. Carter has 24 square boxes of paperclips. How many different rectangles can she make with the 24 boxes of paperclips? What are the dimensions of each of the different rectangles?
 - a** Mrs. Carter is out of storage space, so she is going to keep her paperclip boxes on the windowsill. What are the dimensions of the rectangle you think Mrs. Carter should use? Explain your thinking.