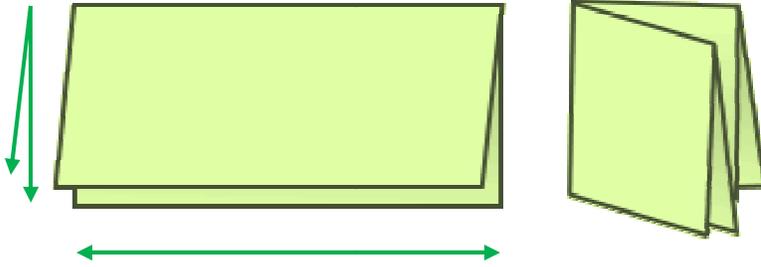


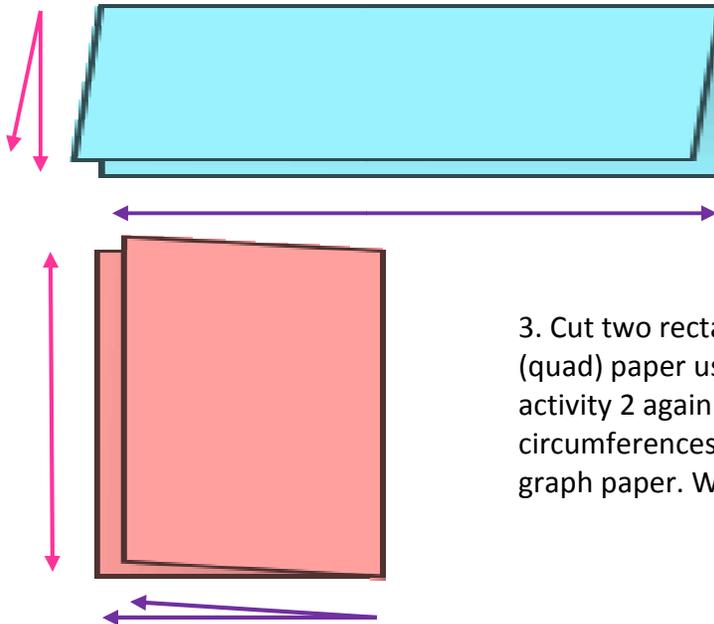
# Comparing Area's of Squares and Rectangles

Folding is an easy way to show the concept

1. Fold a square in half and in four by folding it a second time. What is the shape of your folded paper? Unfold it and count the small parts. Do they each have the same area and circumference? How come? Repeat using graph (quad) paper to measure sides and areas.



2. Take two identical rectangles of different color paper and put them in landscape position. Fold the first paper in half with a long horizontal fold (blue picture). Fold the second paper in half with a short vertical fold (pink picture). Compare the two folded papers: what is different about them? Although they have a different shape, they must be similar in area. How come?



3. Cut two rectangles of the same shape from graph (quad) paper using the squares as cutting lines. Do activity 2 again. Compare the areas and circumferences by counting the squares of the graph paper. What do you notice? How come?

1. Four little squares; they all have the same area as their sides are all the same:  $\frac{1}{2}$  the side of the original square.
2. The two halves have different length and widths. The blue rectangle purple and half pink. The pink rectangle half purple and pink. They have similar areas: half of the unfolded page. Check using 'area is length times width': half pink times purple is equal to pink times half purple.
3. Similar to #2, the size of the pink and purple sides can be measured by counting the squares