Connecting Formulas for Area and Circumference

1) *What is the sum of the lengths of the little arcs that form the "base" of this "parallelogram" compared with the circumference of the original circle? Why?*

2) Write an expression for half the circumference in terms of the radius of the circle.

3) Explain why the sum of the arcs of the "base" of the rearranged shape is r π.

4) Compare the height of the "parallelogram" with the length of the radius of the original circle.