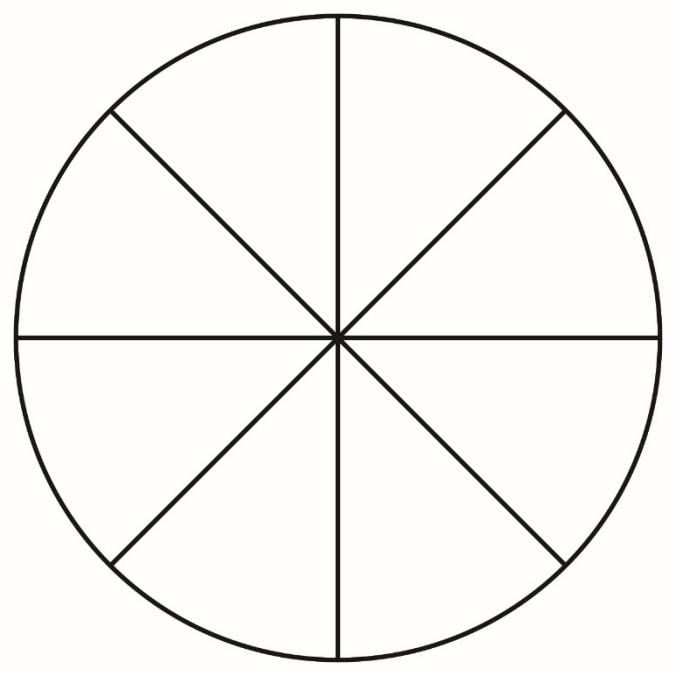
Name_____ Date_____

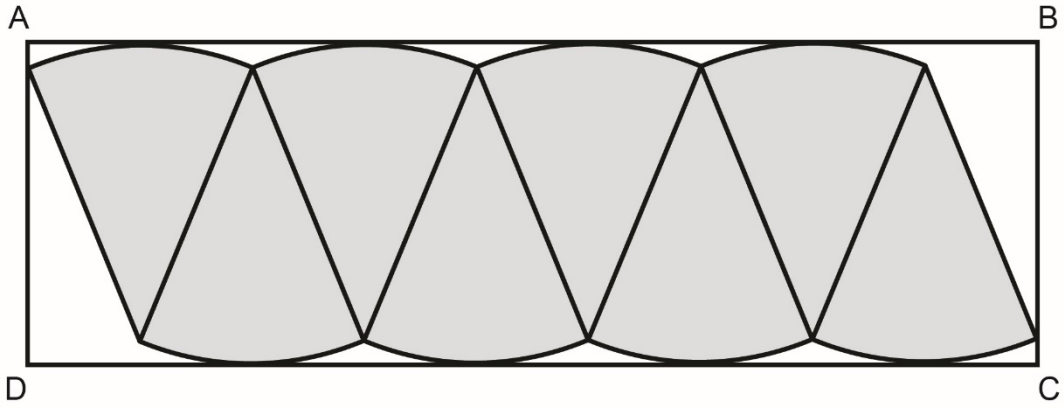
Shape and Space
Unit 1 Line Master 8a

Explore the Area of a Circle 2

1. Cut apart the sections of this circle.



2. Arrange and glue the pieces inside the rectangle ABCD as shown.



Name_____ Date_____

Shape and Space
Unit 1 Line Master 8b

Explore the Area of a Circle 2 (cont'd)

3. Determine the area of rectangle ABCD to approximate the area of the circle.

4. The area of a rectangle relates to the measures of a circle:
   Area of rectangle ABCD = AB × BC
   $= \pi r \times r$
   $= \pi r^2$

   a) The length of the rectangle, AB, is approximately half of the circumference, or πr. Explain why.

   b) Why is the width of the rectangle, BC, the same as the radius, r?