

## Going in Circles

Leader



Develop a mental and visual perception of degree readings of angles.



You will need:

- Circles (see Materials Page)
- Scissors
- Pencil



Do this:

- Make sure students follow the steps.
- Encourage students to make folds and cuts carefully.
- Let students work and make their own discoveries.



Student \_\_\_\_\_

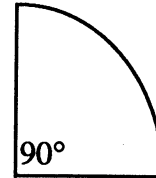


Do this:

● Task 1:

1. Cut out the circles.
2. Fold one circle in half.
3. Fold in half again, thus making fourths of your circle.  $\frac{1}{2}$  of  $\frac{1}{2} = \frac{1}{4}$
4. Cut out one of the fourths.

5. The fourth of your circle is an angle.  
What number of degrees does it contain?  
 $\frac{1}{4}$  of 360 = \_\_\_\_\_



6. Before you lay this angle aside, write its degree-reading inside the angle, like this:

● Task 2:

1. From the same circle, cut out another fourth part.
2. Fold this part in half. Crease and then open it, to see the twin angles inside. Cut them apart, and label their degree-readings  $\frac{1}{2}$  of \_\_\_\_\_ = \_\_\_\_\_

● Task 3:

Look at the part of your circle that remains.

- a. What fractional part of the circle is it?
- b. Why is it called a semi-circle?
- c. Since a circle contains 360 degrees, what is the degree-reading of a semi-circle?
- d. Write the reading on the straight portion of the semi-circle. (Geometrically speaking, we call this angle a straight angle.)

● Task 4:

Repeat these steps with another of your circles.

Are your angles the same sizes, even though the circles were not?

● Now you are ready to do some research. It is your BONUS task:

Find, cut out, and label a central angle which measures  $\frac{3}{8}$  of 360.

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