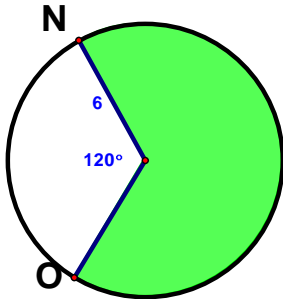


Name: \_\_\_\_\_  
Period: \_\_\_\_\_

**Geometry**  
**Problem Solving #2**  
**Due Friday April 23<sup>rd</sup>**

1. Determine the area of the shaded region.



2. A supplement of  $\angle 1$  is four times as large as the complement of  $\angle 1$ . Find the measure of  $\angle 1$ .
3. A vendor sells large sodas for \$.70 and small sodas for \$.50. One afternoon, he sold a total of 1000 sodas for a total of \$580. How many large sodas did he sell?
4. Ray  $BD$  is the bisector of  $\angle ABC$ . If  $m\angle ABD = 2x+14$  and  $m\angle CBD = 5x-10$ , what is the measure of  $\angle ABD$ ?

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Period: \_\_\_\_\_

5. Solve the system of equations for  $2y = 3x + 8$  and  $y = 2x + 3$

6. Determine the number of diagonals in a 23 sided figure.

7. Determine the sum of the interior angles for a 32-sided figure.