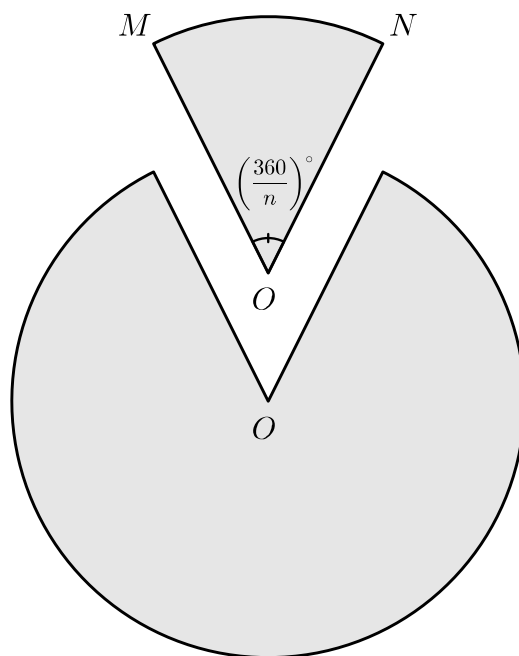




**Problem of the Week**  
**Problem D**  
**It Matters How You Slice It**

$MON$  is a sector of a circle with centre  $O$ , radius  $n$  and  $\angle MON = \left(\frac{360}{n}\right)^\circ$ .



Determine all positive integers  $n$  for which the sector  $MON$  has perimeter greater than 20 and less than 30.

Did you know that the ratio of the length of an arc to the circumference is the same as the ratio of the sector angle to  $360^\circ$ ? The same ratio holds when comparing sector area to the total area of a circle.

