

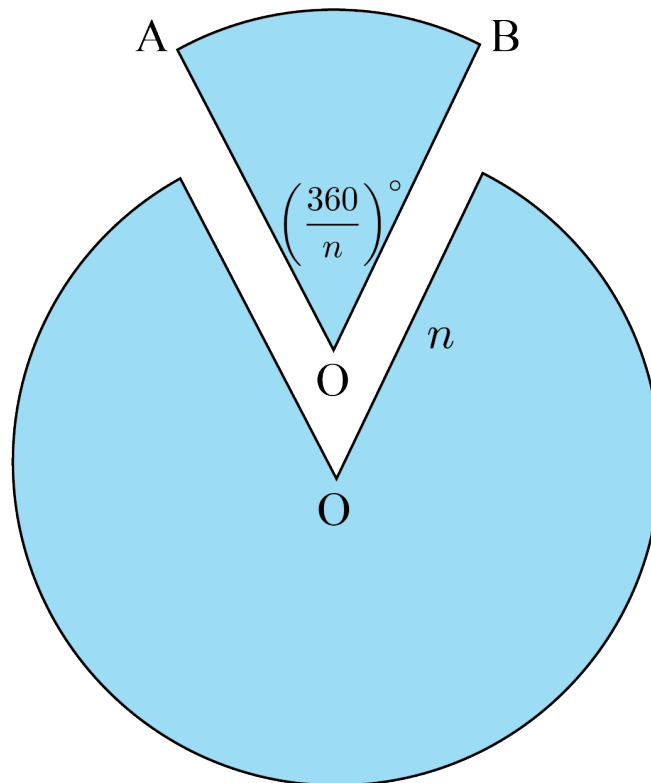


Problem of the Week

Problem D

One Slice at a Time

Points A and B are on a circle with centre O and radius n so that $\angle AOB = \left(\frac{360}{n}\right)^\circ$. Sector AOB is cut out of the circle.



Determine all positive integers n for which the perimeter of sector AOB is greater than 20 and less than 30.

NOTE: You may use the fact that the ratio of the length of an arc to the circumference of the circle is the same as the ratio of the sector angle to 360° . In fact, the same ratio holds when comparing the area of a sector to the total area of the circle.

