QUESTION

To find the value of π, a scientist inscribes a n-sided polygon in a circle of diameter 1. The perimeter of the regular polygon is the value of π for $n \rightarrow \infty$. The approximate value of π by using a 6-sided regular polygon is

   (A) 3.000
   (B) 3.142
   (C) 3.232
   (D) 3.464

HINT

The angle subtended by each side of the polygon is $\varphi = \frac{2\pi}{n}$. The length of each side is $s = 2r \sin\frac{\varphi}{2}$, where r is the radius of the circle.