1. Take a circle of radius 3 . Consider the points $A$ and $B$ on the circle as well as the arc that they determine. Let $P$ be a point on the circle outside the arc and let $\angle A P B=\frac{\pi}{7}$. Compute the length of the $\operatorname{arc} A B$.

2. Explain how Eratosthenes estimated the radius of the Earth. Use the diagram below as a guide in your explanation of his argument.

