

Problem 4

Let $\{P_n\}$ be a sequence of points determined as in the figure. Thus $|AP_1| = 1$, $|P_n P_{n+1}| = 2^{n-1}$, and angle $AP_n P_{n+1}$ is a right angle. Find $\lim_{n \rightarrow \infty} \angle P_n A P_{n+1}$.

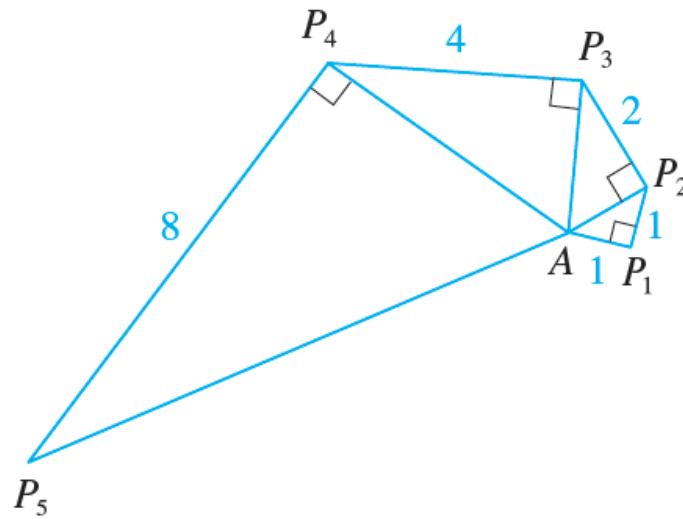


FIGURE FOR PROBLEM 4