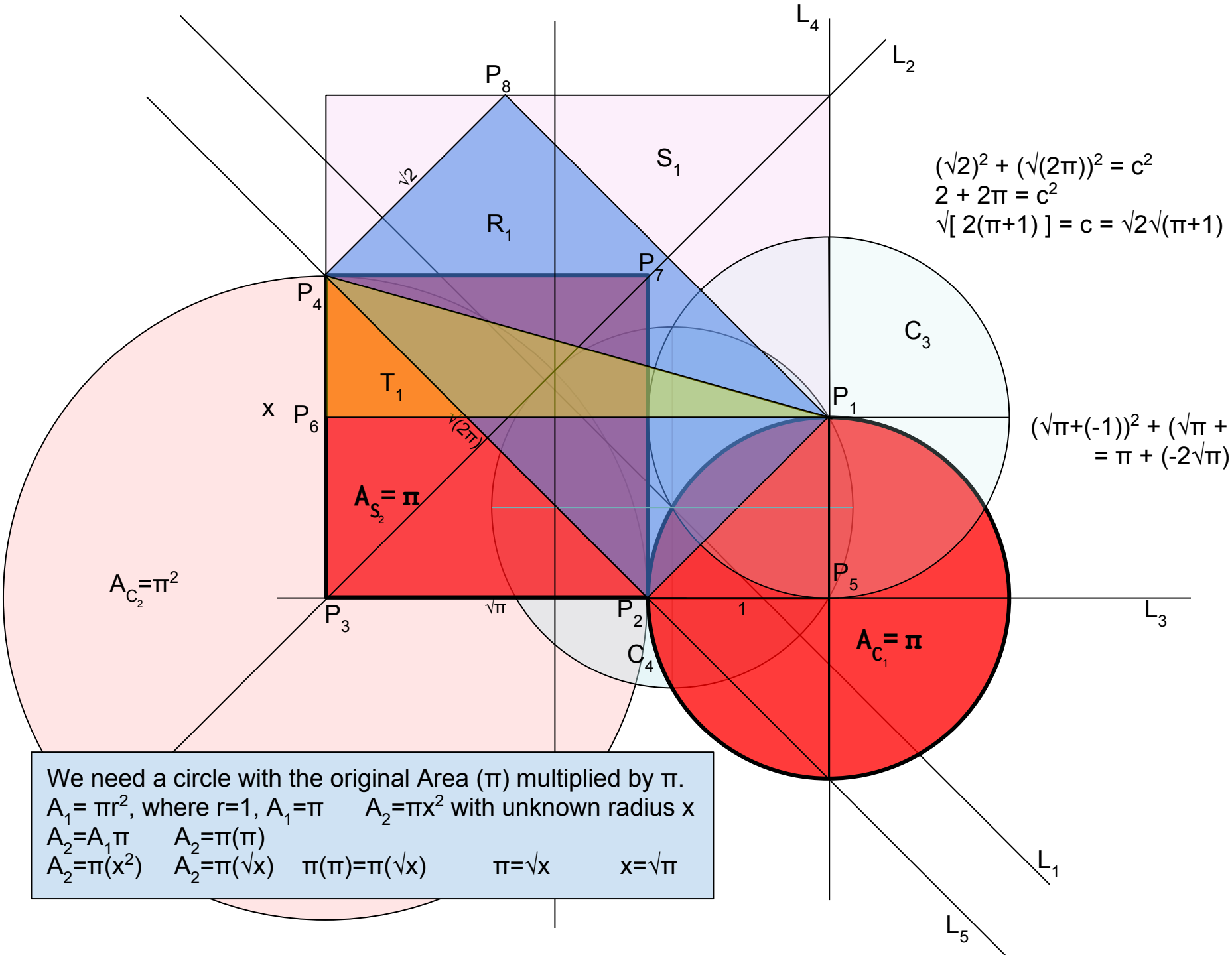

We need a circle with the original Area (π) multiplied by π.
$A_1 = \pi r^2$, where $r=1$, $A_1=\pi$ $A_2=\pi x^2$ with unknown radius x
$A_2=A_1\pi$ $A_2=\pi(\pi)$
$A_2=\pi(x^2)$ $A_2=\pi(\sqrt{x})$ $\pi(\pi)=\pi(\sqrt{x})$ $\pi=\sqrt{x}$ $x=\sqrt{\pi}$