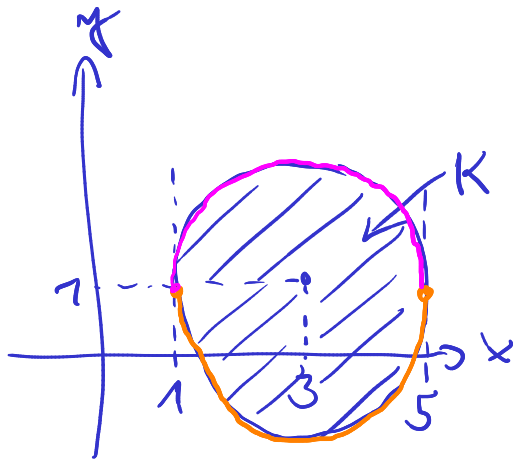


670

$$r=2, M=(3,1)$$



$$\begin{aligned}(x-3)^2 + (y-1)^2 &= 2^2 \\ \Leftrightarrow (y-1)^2 &= 2^2 - (x-3)^2 \\ \Leftrightarrow |y-1| &= \sqrt{2^2 - (x-3)^2} \\ \Leftrightarrow y-1 &= \pm \sqrt{2^2 - (x-3)^2} \\ \Leftrightarrow y &= 1 \pm \sqrt{2^2 - (x-3)^2}\end{aligned}$$

$$K = \{(x,y) \in \mathbb{R}^2 : 1 \leq x \leq 5, 1 - \sqrt{2^2 - (x-3)^2} \leq y \leq 1 + \sqrt{2^2 - (x-3)^2}\}$$