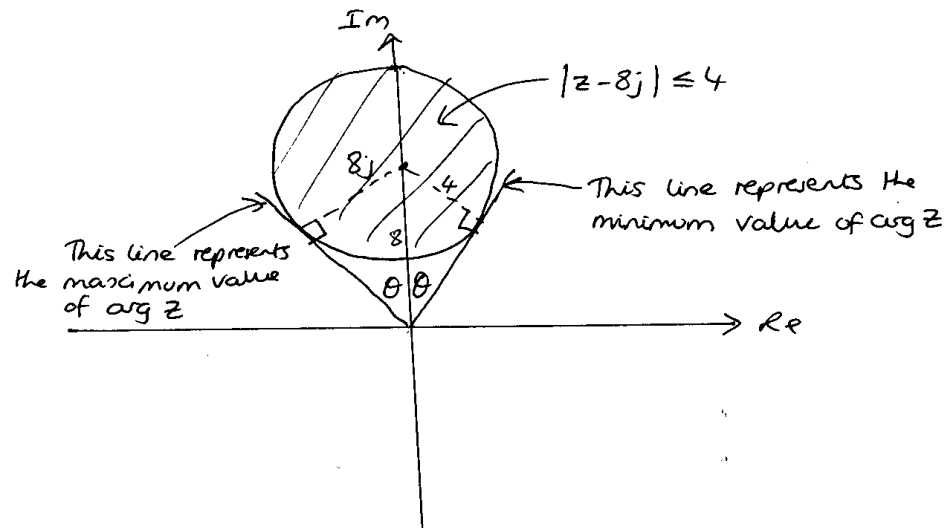


Further Pure 1

Complex Numbers

Exercise F

2.



$$\sin \theta = \frac{4}{8} = \frac{1}{2} \Rightarrow \theta = \frac{\pi}{6}$$

$$\begin{aligned} \text{Minimum value of } \arg z &= \frac{\pi}{2} - \theta \\ &= \frac{\pi}{2} - \frac{\pi}{6} = \frac{\pi}{3} \end{aligned}$$

$$\begin{aligned} \text{Maximum value of } \arg z &= \frac{\pi}{2} + \theta \\ &= \frac{\pi}{2} + \frac{\pi}{6} = \frac{2\pi}{3} \end{aligned}$$

$$\frac{\pi}{3} \leq \arg z \leq \frac{2\pi}{3}$$