Question 15 **(6 marks)**

Let $z = r\,cis\,\theta$ be a complex number such that $\frac{\pi}{2} < \theta < \pi$.

(a) Express in terms of r and θ the complex number $\frac{\overline{z}}{-\sqrt{2}\,(i+1)}$. (3 marks)

(b) Express $\alpha = Arg(z - ri)$ in terms of θ where $0 < \alpha < 2\pi$. (3 marks)