

8. (a) Show that  $\tan \frac{\pi}{8} = -1 \pm \sqrt{2}$

Qtn. The  $n^{\text{th}}$  term of an A.P. is  $\left(\frac{3n-1}{6}\right)$ ; show that

the sum of the first  $n$  terms is  $\frac{n}{12}(3n+1)$