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$$r = \sqrt{(-2)^2 + 0^2} = \sqrt{4} = 2, \quad \tan \theta = \frac{0}{-2} \Rightarrow \theta_R = \tan^{-1} 0 = 0$$

Since -2 is negative and quadrantal in the complex plane, $\theta = \pi$; $2(\cos \pi + i \sin \pi)$