## Polar coordinates - AS Further Mathematics P1

1. June/2022/Paper_7366/01/No.8

The curve $C$ has the polar equation

$$
r=4-2 \cos \theta \quad-\pi<\theta \leq \pi
$$

(a) Verify that the point with polar coordinates $\left(3, \frac{\pi}{3}\right)$ lies on $C$
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(b) Find the exact polar coordinates of the point on $C$ which is furthest from the pole, $O$ [3 marks]
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(c) Find the exact Cartesian coordinates of the point on $C$ where $\theta$ is $\frac{\pi}{6}$
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