1. Draw the graph of $r = 3\sin 2\theta$.

2. For the curve $r = 1 - \cos \theta$, find points at which tangent line is vertical.
1. Draw graph of the curve \( r = 2 - 2 \cos \theta \) and find length of this curve.

2. For the curve \( r = 4 - 3 \sin \theta \), find slope of the tangent line at \( \theta = \pi \).