1. (6 points) Sketch the the polar equation given below. Start by graphing \( r \) as a function of \( \theta \).

\[ r = 2 - 2\sin \theta \]

2. (8 points) Find the area enclosed by the curve \( r = 2 - 2\sin \theta \)
3. (5 points) Find a formula for the general term, $a_n$, of the sequence, assuming the pattern of the first few terms continues.

\[
\left\{ \frac{1}{2}, \frac{4}{3}, \frac{9}{4}, \frac{16}{5}, \frac{25}{6}, \ldots \right\}
\]