1. **Carefully** sketch the graphs of the polar curves $r = -5 \sin \theta$ and $r = 5 + \cos \theta$ on the given paper.

2. Consider the curve defined by $x = a \sin t, y = b \cos t, \ 0 \leq t \leq 2\pi$, where $a$ and $b$ are constants,
   a) Describe and sketch the curve.
   b) Find the slope of tangent line to the curve at $t = \pi/4$.
   c) Find the area it encloses.