No Calculators, closed book, no lecture notes, no homework. Show steps.

1. Find the length of the curve $x = 5t^2 + 1$, $y = 4 - 3t^2$, $0 \leq t \leq 2$

2. Sketch the polar equation $r = 3(1 - \cos \theta)$, $0 \leq \theta \leq 2\pi$