Problem 1: Find $\frac{dy}{dx}$ for the parametric curve $c(t) = (t^3, t^2 - 1)$ at $t = -4$.

At $t = -4$, 

$$\frac{dy}{dx} = \frac{2}{3t} = -\frac{1}{6}$$
Problem 2: Find a parameterization $c(t)$ of a circle with radius 4 centered at $(3,9)$.

Unit circle: $c(t) = (\cos t, \sin t)$.
Circle centered at origin, radius 4: $c(t) = (4 \cos t, 4 \sin t)$.
Circle centered at $(3,9)$, radius 4: $c(t) = (3 + 4 \cos t, 9 + 4 \sin t)$. 