A helix with 17 turns has height H and radius R. Charge is distributed on the helix so that the charge density increases like (i.e. proportional to) the square of the distance up the helix. At the bottom of the helix the linear charge density is 0 $\frac{\text{C}}{\text{m}}$. At the top of the helix, the linear charge density is 13 $\frac{\text{C}}{\text{m}}$. What is the total charge on the helix?