PROBLEM:

Solve the following complex-valued equations. Reduce the answers to a simple numerical form.

(a) Find all solutions of $z^{13} = -1$. Express your answers for z in polar form. How many *different* solutions exist?

(b) The following equation depends on n and T. Whenever T is assigned a value, the equation must then be true for all n.

$$e^{j(\pi/13)n} = e^{j13\pi nT} \qquad \text{for all } n$$

Find all possible values for T for which the equation will be true.