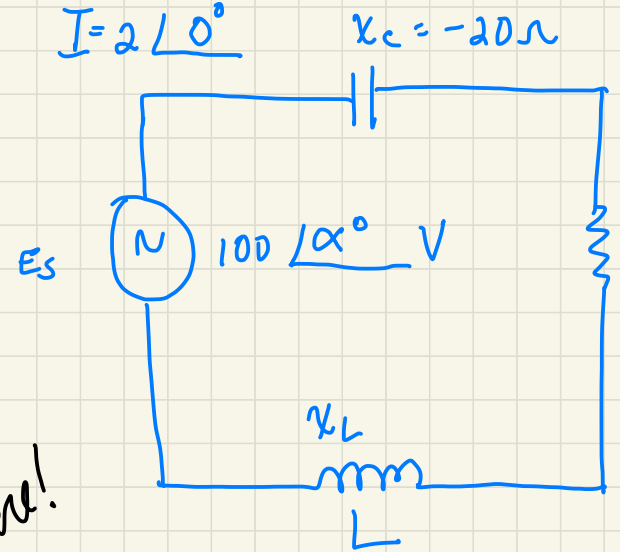

What is the value of X_L

Absolute Value of E_S = 100V

they give this hint:

First find Z.
E & I are given
Next Find X
Then X_L

I'M Lost Here!

$\frac{100V}{2+j0} = 50\Omega$ I think this is Z.

$X_C + 30\Omega = (0-j20) + (30+j0) = 30-j20$

$Z = (50+j0) - (30-j20)$

$= 20+j20$