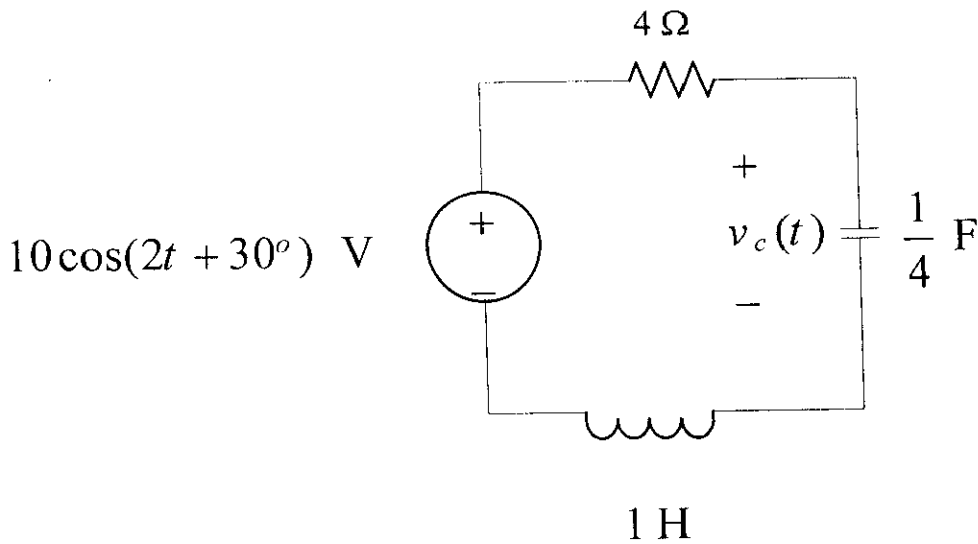


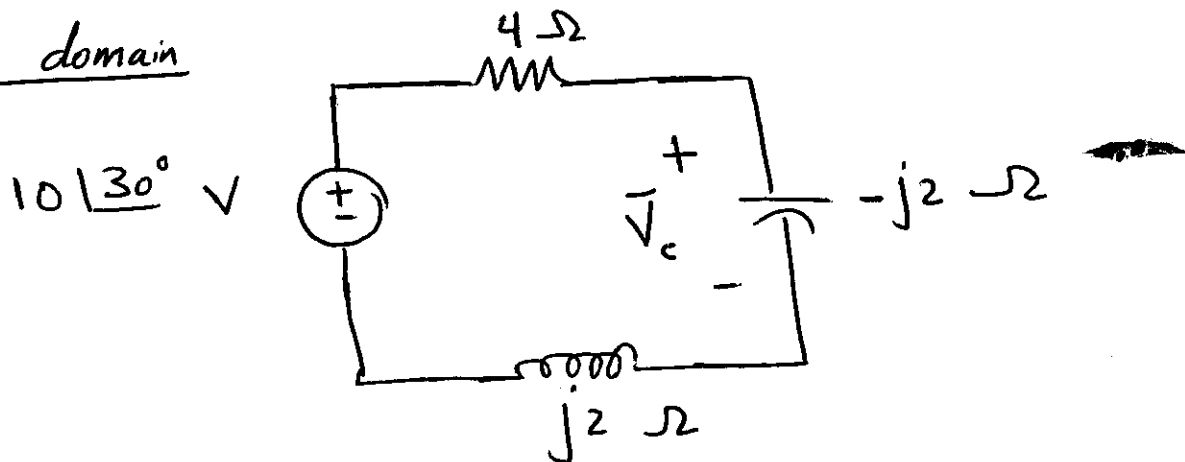
EE 204 – Fall 2009
Quiz 5

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For the Circuit shown above Find the voltage $v_c(t)$?

Phasor domain



$$\bar{V}_c = \frac{-j2}{4 - j2 + j2} 10 \angle 30^\circ = \frac{-j2}{4} 10 \angle 30^\circ$$

$$= \frac{2 \angle -90^\circ}{4} 10 \angle 30^\circ = 5 \angle -60^\circ \text{ V}$$

$$\Rightarrow v_c(t) = 5 \cos(2t - 60^\circ) \text{ V}$$