$\qquad$
a. In the circuit at right, $V_{s}=(8 \mathrm{~V}) \cos \omega t$. Find the frequency $(f$ not $\omega)$ for which the magnitude of $v_{L}$ is 2 V . Calculate the phase of $v_{L}$ at that frequency.

$f=$ $\qquad$

$$
\theta_{L}=
$$

$\qquad$
b. In the circuit at right $V_{s}=(8 \mathrm{~V}) \cos \omega t$. Find the frequency ( $f$ not $\omega$ ) for which the phase of $v_{R}$ is $+45^{\circ}$. Calculate the magnitude of $v_{R}$ at that frequency.

$f=$ $\qquad$ $\left|\tilde{\mathbf{V}}_{\mathbf{R}}\right|=$ $\qquad$

