



1. Phase Difference is, $97\mu \times 1k \times 360 = 34.92 \text{ deg}$
2. A. for $f = 500\text{Hz}$, Phase Difference = 57.78 deg
B. for $f = 2\text{kHz}$, Phase Difference = 19.20 deg

In both cases, V_{out} leads V_{in}