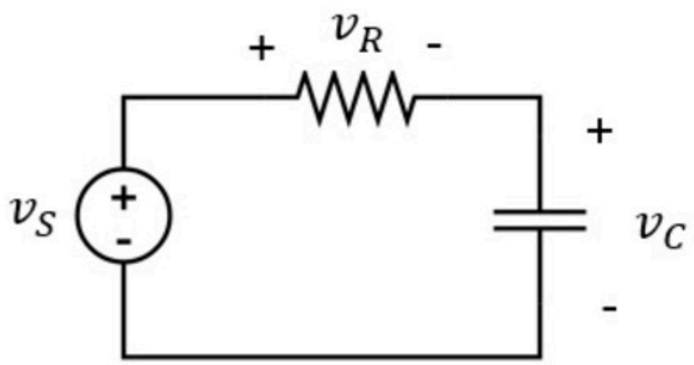
Phasors 004

Problem has been graded.

You are given $v_S = A_1 \cdot \sqrt{2} \cdot cos\,(100t + B_1)$

$v_C = A_2 \cdot cos\,(100t + B_2)$

Find $v_R = A_3 \cdot cos\,(100t + B_3)$ with $-180° \leq B_3 \leq 180°$



Solve without using a calculator.

Given Variables:

A1 : 4 V

B1 : 20 degrees

A2 : 4 V

B2 : -25 degrees

Calculate the following:

A3 (V) :

4 ✓

B3 (degrees) :

65 ✓

Hint: Convert to phasors. Multiply out the common exp(jB) factor.