3-4)

A is 8 units at $60°$ $A_x = A \cos\theta_A = 8 \cos60° = 4$; $A_y = A \sin\theta_A = 8 \sin60° = 6.93$

B is 6 units at $-30°$ $B_x = B \cos\theta_B = 6 \cos(-30°) = 5.2$; $B_y = B \sin\theta_B = 6 \sin(-30°) = -3.0$

$C_x = A_x + B_x = 4 + 5.2 = 9.2$

$C_y = A_y + B_y = 6.93 + (-3) = 3.93$

$C = (C_x{}^2 + C_y{}^2)^{1/2} = $ <mark>10.0 units</mark>

$\theta_C = \arctan(C_y/C_x) = $ <mark>23°</mark>

However, we need to double check the quadrant. Since $C_y > 0$ and $C_x > 0$, **C** is in the first quadrant, so $23°$ is O.K.