1/2

$$\underline{V} = \underline{V}_1 + \underline{V}_2 \quad (\text{But } V \neq V_1 + V_2 \text{ !!})$$

$-96.9°$

3

4

$V_2 = $

12 units

β

θ_x

$V_1 = 10$ units

$60°$

$36.9°$

x

Graphically, $\underline{V = 16.4 \text{ units}, \quad \theta_x = 83°}$

Algebraically, $V^2 = 10^2 + 12^2 - 2(10)(12)\cos 96.9°$

$\underline{V = 16.51 \text{ units}}$

$$\frac{\sin \beta}{12} = \frac{\sin 96.9°}{16.51} \quad) \quad \beta = 46.2°$$

$$\theta_x = \beta + 36.9° = 46.2° + 36.9° = \underline{83.0°}$$