$\underline{V}_2$ (21 units)

$\underline{V}_1$

3
4

θ_x

$\underline{V}_2' = \underline{V}_2 + (-\underline{V}_1)$
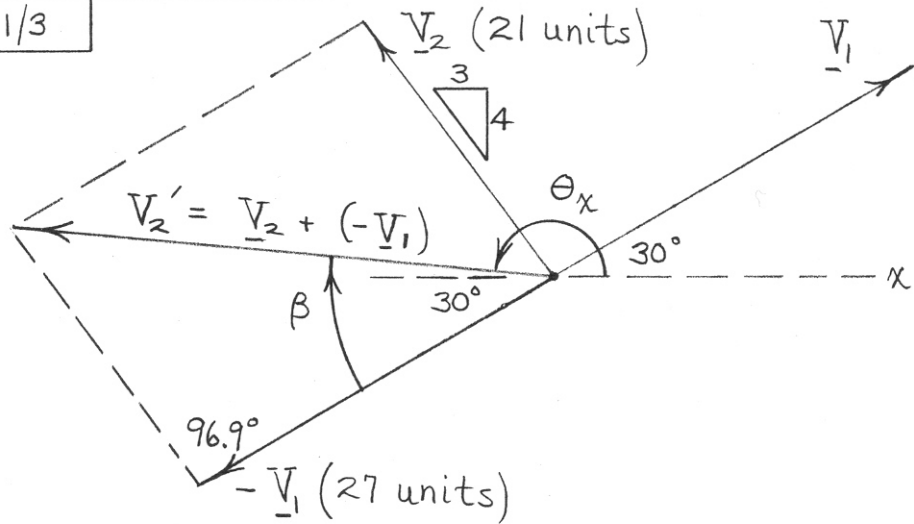
30°

30°

x

β

30°

96.9°

$-\underline{V}_1$ (27 units)

Graphically, $\underline{V'} = 36$ units , $\theta_x = 175°$

Algebraically, $V'^2 = 27^2 + 21^2 - 2(27)(21)\cos 96.9°$

$V' = 36.1$ units

$\dfrac{\sin \beta}{21} = \dfrac{\sin 96.9°}{36.1}$, $\beta = 35.2°$

$\theta_x + \beta = 210°$, $\theta_x = 210 - 35.2° = \underline{174.8°}$