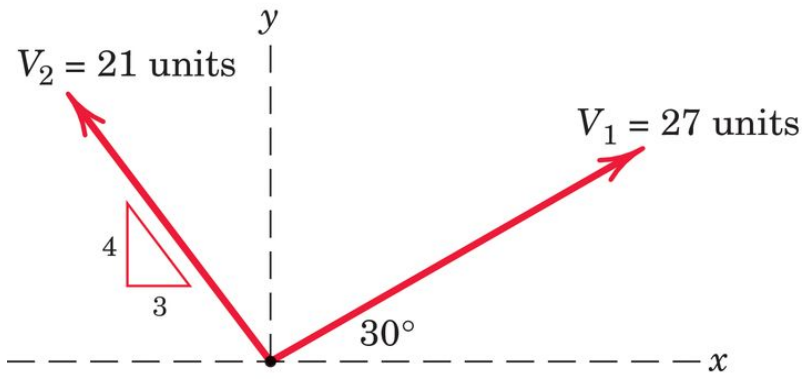
Engr 152, Fall 2020

HW #1: Chapter 1, Meriam and Kraige, 8th Ed.: Probs. 1/2, 1/7abc, 1/9

1/2 Determine the magnitude of the vector sum $\underline{\mathbf{V}} = \underline{\mathbf{V_1}} + \underline{\mathbf{V_2}}$ and the angle θ_x which $\underline{\mathbf{V}}$ makes with the positive x-axis. Complete both **graphical** (use trigonometric and/or geometric methods (laws of sines, cosines, etc.); **OR** draw vectors *to scale* and measure lengths and angles) and **algebraic** (vector algebra, $\hat{\imath} - \hat{\jmath}$) solutions.



1/7 Determine the weight in newtons of a woman whose weight in pounds is 125 lb. Also, find her mass in slugs and in kilograms.

1/9 Computer the magnitude F of the force which the sun exerts on the earth. Perform the calculation first in pounds and then convert your result to newtons. Refer to Table D/2 (or the internet) for necessary physical quantities. Draw the force that acts on each body.