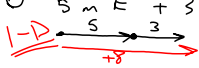
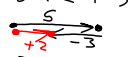
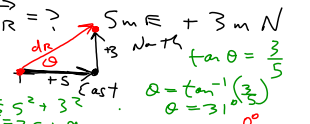


Vector : magnitude (size)
 \vec{v} = Velocity + dir (angle bearing)
 \vec{d} = displacement \vec{F} = Force

TIP-TAIL Vector addition

① $5\text{ m E} + 3\text{ m E} = +8\text{ m}$


② $5\text{ m E} + 3\text{ m W}$
 $\vec{dR} = +5 - 3 = +2\text{ m}$


③ $5\text{ m E} + 3\text{ m N}$
 $\vec{dR} = ?$
 $\tan \theta = \frac{3}{5}$
 $\theta = \tan^{-1}(\frac{3}{5}) = 31^\circ$
 $dR^2 = 5^2 + 3^2$
 $dR = 2.5 + 9 = 5.83\text{ m}$


$d_1 = 5\text{ m } \odot \text{ E } (90^\circ)$
 $+ d_2 = 3\text{ m } \odot \text{ N } (0^\circ)$
 $= dR = 5.83\text{ m } \odot \text{ (E } 31^\circ \text{ N)}$
 59° Bearing

Feb 17-12:33 PM