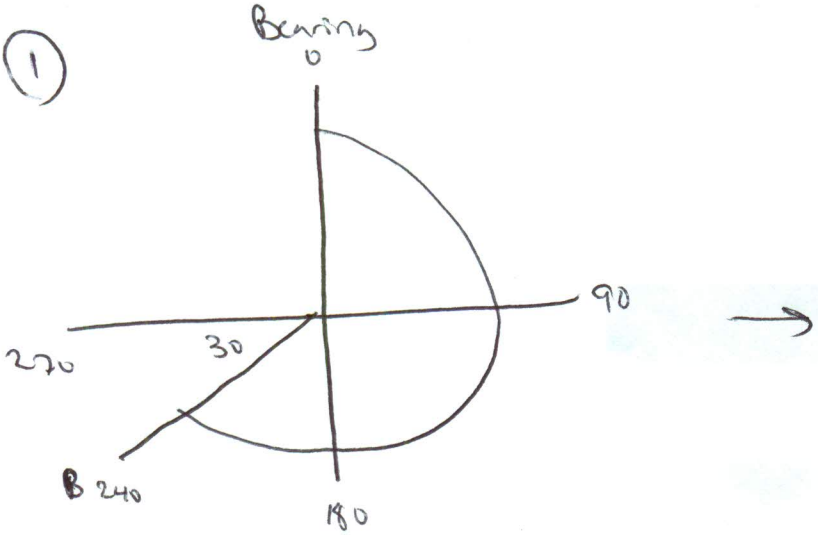
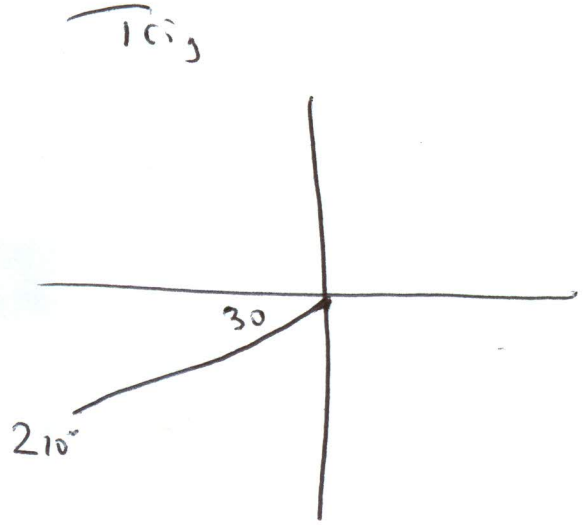
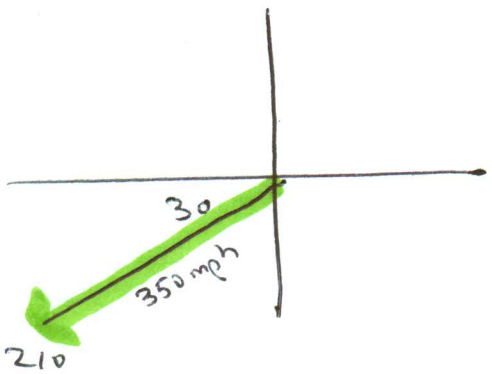
(1)





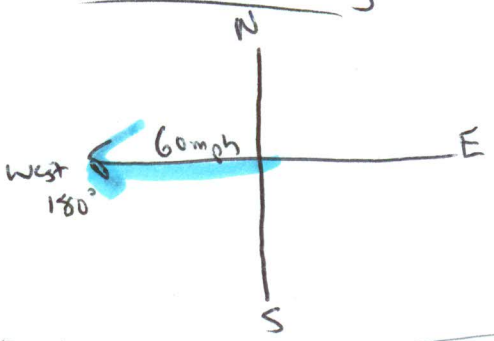
Plane Only



$350 \cos 210$ $\quad$ $350 \sin 210$

$-303i$ $\quad$ $-175j$

Wind Only



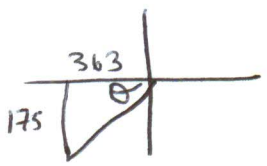
$60 \cos 180°$ $\quad$ $60 \sin 180$

$-60i$ $\quad$ $0j$

Plane Affected by Wind

$-303i - 60i \quad -175j + 0j$

$-363i - 175j$



$\tan\theta = \frac{175}{363}$

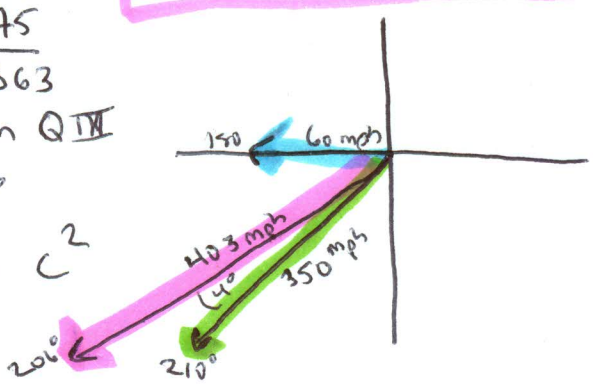
$\theta = 26°$ in Q III

$\theta = 206°$

$175^2 + 363^2 = c^2$

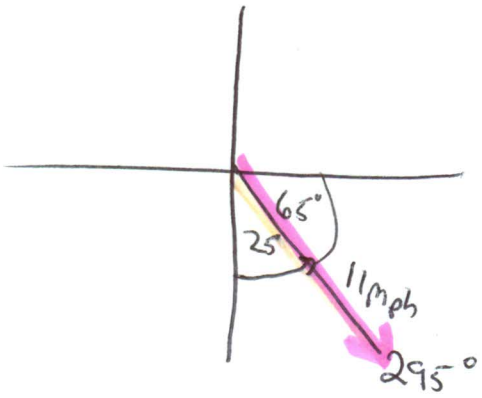
$c = 403$

403 mph @ 206°
4° off-course



(2)

Boat Only



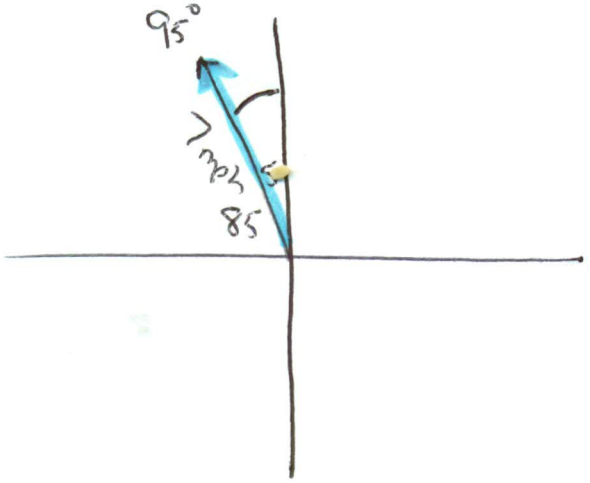
$11 \cos 295$

$4.64i$

$11 \sin 295$

$-9.97j$

Ocean Current Only



$7 \cos 95$

$-.6i$

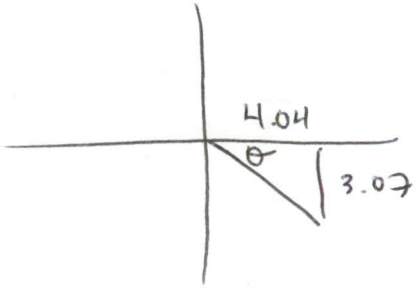
$7 \sin 95$

$6.9j$

Boat Affected by Ocean Current

$4.64 - .6$ $\quad -9.97 + 6.9$

$4.04i \quad -3.07j$



2nd tan $\frac{3.07}{4.04}$

$\theta = 37°$ in QIV

$\theta = 323°$

$a^2 + b^2 = c^2$

$4.04^2 + 3.07^2 = c^2$

$c = 5.1$

5.1 mph @ 323°
25° off-course