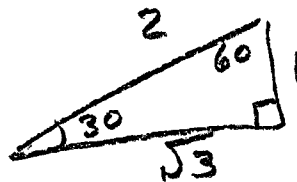
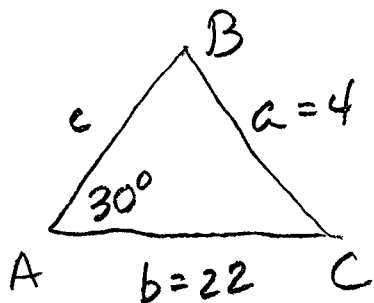


Mth 113

Monday 4-1-13

Class Notes

(17) $a = 4$ $b = 22$ $A = 30^\circ$ $\triangle ABC$
Pg 214



$$4^2 = 22^2 + c^2 - 2(22)(c)\cos 30^\circ$$

$$16 = 484 + c^2 - 44c\left(\frac{\sqrt{3}}{2}\right)$$

$$0 = 468 - 22\sqrt{3}c + c^2$$

$$c^2 - 38.105c + 468 = 0$$

$$a = 1$$

$$b^2 - 4ac$$

$$b = -38.105$$

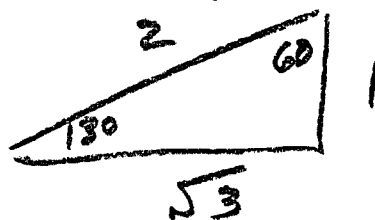
$$(-38.105)^2 - 4(1)(468)$$

$$c = 468$$

$$1452 - 1872 = -420 = d$$

NO SOLUTION

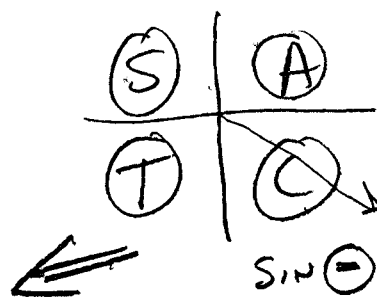
⑦ Convert to rectangular, Vector
Pg233 $(25, 300^\circ)$ Ref. angle = 60°



$25 \cos 60 ; 25 \sin 60$

$25(\frac{1}{2}), 25(\frac{\sqrt{3}}{2})$

$(\frac{+25}{2}, -\frac{25\sqrt{3}}{2})$



DONT FORGET
ASTC!

pg 234 ⑮ Convert to polar form -
 $V = (-3.0, 5.2)$ (S) | (A) tan is ⊖

$|V| = \sqrt{(-3.0)^2 + (5.2)^2} = 6.003$

$\theta' = \tan^{-1}(\frac{5.2}{-3}) = 60.018^\circ \therefore \theta = 180 - \theta'$
 $= 119.982^\circ$

$\therefore (6.0, 120^\circ)$

③ Add, leave ans. in polar, nearest tenth.
pg 234

Q/A
T/C

$$(10, 200^\circ), (29.3, 250^\circ)$$

$$V_1 \qquad V_2$$

$$\begin{aligned} V_1 &= 10 \cos 200^\circ, \quad 10 \sin 200^\circ \\ &= 10(-0.9397), \quad 10(-0.3420) \\ &= -9.397, \quad -3.420 \\ &\qquad V_{1x} \qquad V_{1y} \end{aligned}$$

$$\begin{aligned} V_2 &= 29.3 \cos 250^\circ, \quad 29.3 \sin 250^\circ \\ &= -10.021, \quad -27.533 \\ &\qquad V_{2x} \qquad V_{2y} \end{aligned}$$

$$\text{QIII} \therefore V_{Rx} = -19.418, \quad V_{Ry} = -30.953$$

$$\therefore |V_r| = \sqrt{(-19.418)^2 + (-30.953)^2}$$

$$|V_r| = 36.539$$

$$\text{QIII} \quad \theta' = \tan^{-1} \left(\frac{30.953}{19.418} \right) = 57.898^\circ$$

$$\therefore \theta = 180 + \theta' = 237.898^\circ$$

$$\Rightarrow \boxed{(36.5, 237.9^\circ)}$$