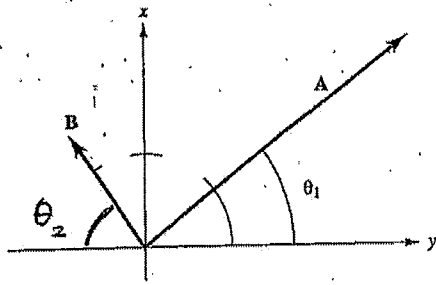


# Trigonometry Review WS 1

1.



A is 100 N.  $\theta_1 = 40^\circ$

B = 50 N  $\theta_2 = 50^\circ$

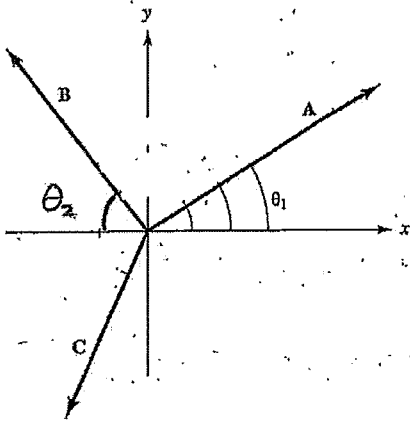
a) Find  $A_x, A_y, B_x, B_y$

b) Find the sum  $\vec{A} + \vec{B} = \vec{R}$

(Find the magnitude and direction of R.)

↳ angle

2.



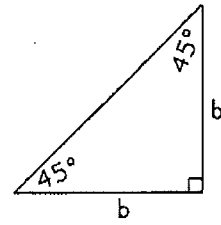
A = 100 N.  $\theta_1 = 30^\circ$

B = 80 N  $\theta_2 = 50^\circ$

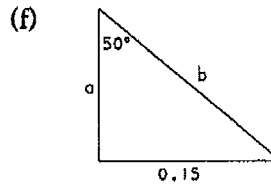
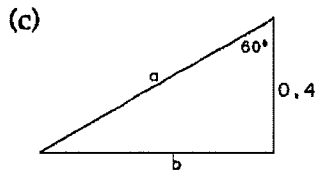
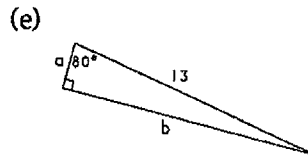
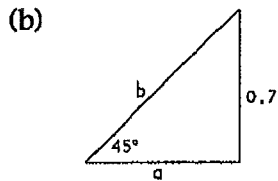
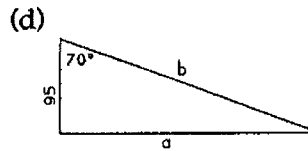
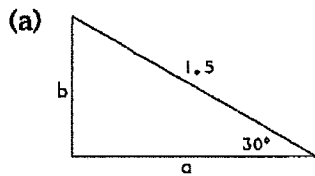
What is the magnitude and direction (angle) of C such that  $\vec{A} + \vec{B} + \vec{C} = \vec{0}$ .

3. True or False :  $\sin^{-1} \theta = \frac{1}{\sin \theta}$

4. Apply the Pythagorean Theorem to the isosceles right triangle shown here to find  $\sin 45^\circ$ ,  $\cos 45^\circ$  and  $\tan 45^\circ$ .



5. Use trig functions to determine the lengths of sides a and b (in arbitrary units) of the right triangles shown below.



6. Use inverse trig functions to determine, to an accuracy of  $0.1^\circ$ , angles  $\alpha$  and  $\beta$  in the right triangles whose side lengths (in arbitrary units) are shown in the figures below.

