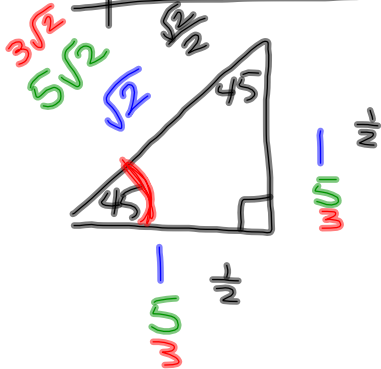


### 13.3 Trig Functions of Any Angle

no calc.

- Obj: 1. Find exact trig values for special angles & their multiples.  
 2. Find approximate values for trig. fncs. of any angle.

#### Special Δs

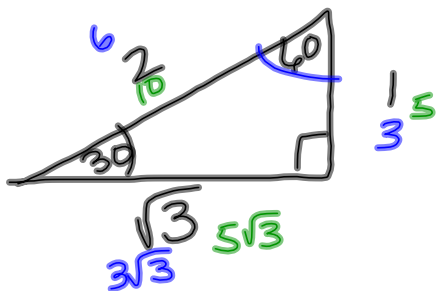


$$\sin 45^\circ = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

$$\cos 45^\circ = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

$$\tan 45^\circ = 1$$

Mar 13-10:58 AM



$$\sin 30^\circ = \frac{1}{2}$$

$$\cos 30^\circ = \frac{\sqrt{3}}{2}$$

$$\tan 30^\circ = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$$

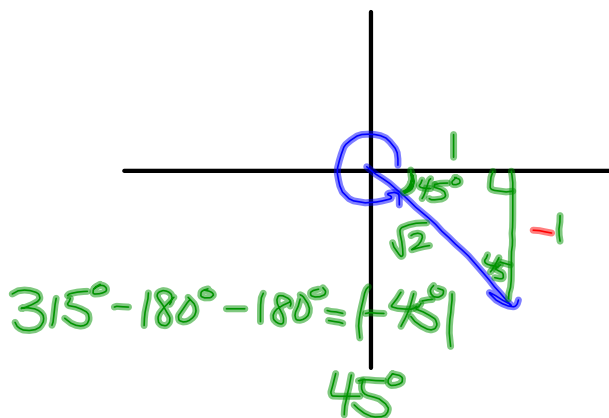
$$\sin 60^\circ = \frac{\sqrt{3}}{2}$$

$$\cos 60^\circ = \frac{1}{2}$$

$$\tan 60^\circ = \sqrt{3}$$

Mar 13-11:24 AM

Find the exact values:  $\sin 315^\circ$ ,  $\cos 315^\circ$ ,  $\tan 315^\circ$



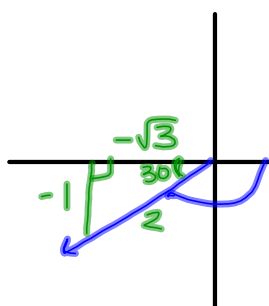
$$\sin 315^\circ = \frac{-1}{\sqrt{2}} = -\frac{\sqrt{2}}{2}$$

$$\cos 315^\circ = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

$$\tan 315^\circ = -1$$

Mar 13-11:29 AM

Find exact values:  $\sin(-150^\circ)$ ,  $\cos(-150^\circ)$ ,  $\tan(-150^\circ)$



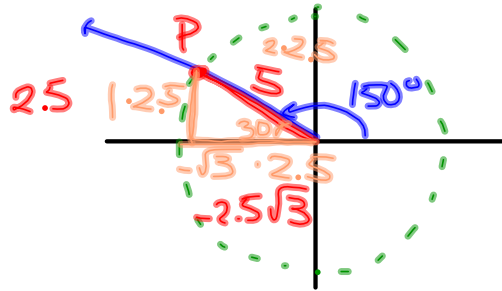
$$\sin(-150^\circ) = -\frac{1}{2}$$

$$\cos(-150^\circ) = -\frac{\sqrt{3}}{2}$$

$$\tan(-150^\circ) = \frac{\sqrt{3}}{3}$$

Mar 13-11:33 AM

Find the exact coordinates of point P, located at the intersection of a circle w/  $r=5$  and the terminal side of  $150^\circ$ .

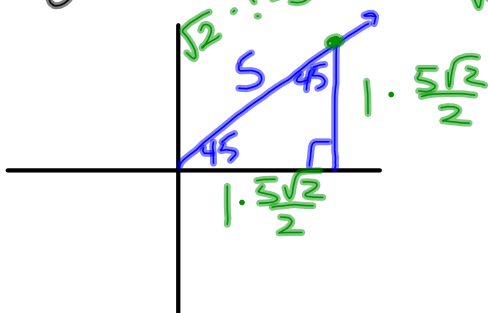


$$P = (-2.5\sqrt{3}, 2.5)$$

Mar 13-11:40 AM

#1 #3

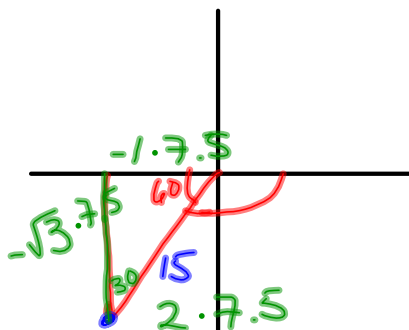
1.  $\theta = 45^\circ$   $r = 5$   $? = \frac{5}{\sqrt{2}} = \frac{5\sqrt{2}}{2}$



$$\left(\frac{5\sqrt{2}}{2}, \frac{5\sqrt{2}}{2}\right)$$

Mar 13-11:44 AM

$$3. \theta = -120^\circ \quad r = 15$$



$$(-7.5, -7.5\sqrt{3})$$

Mar 13-11:52 AM

13.3 Day 1

P848: 9, 14, 20, 21, 22, 38,  
49, 53, 57, 73, 77,  
85, 89

Worksheet: 2, 4, 5, 6

Mar 13-11:54 AM