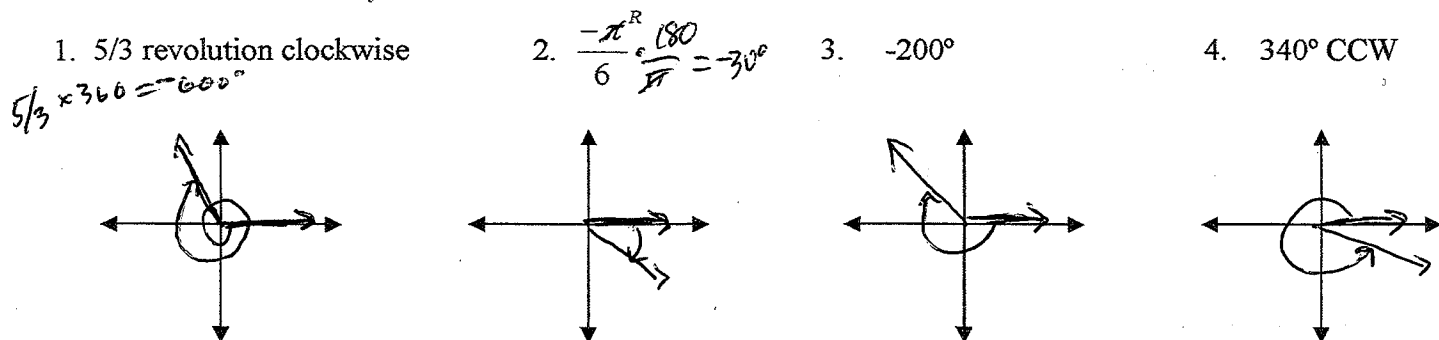


Advanced Algebra – EXAM REVIEW  
Trigonometry

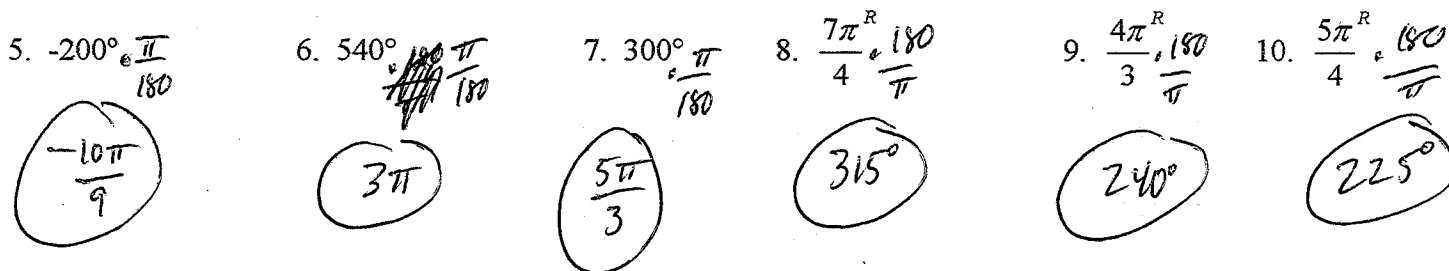
Name Vuy  
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Sketch the angles in standard position.



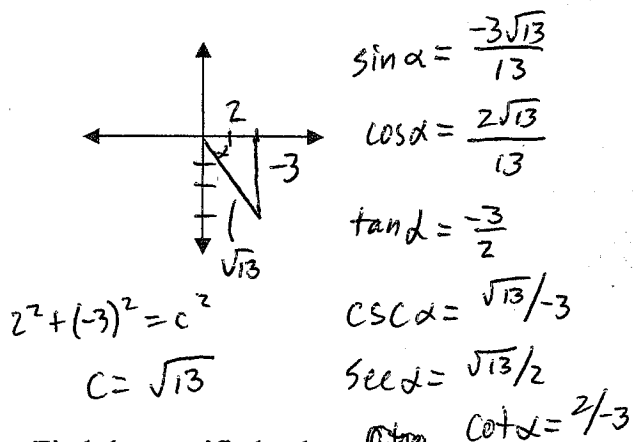
State each angle measure in radians.

State each angle measure in degrees.



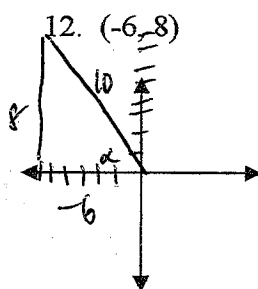
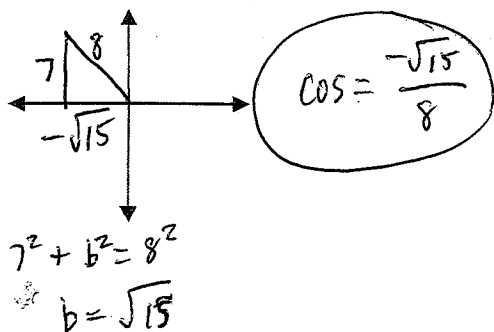
Find the values for the 6 trig functions of  $\angle \alpha$  in standard position whose terminal side contains the following point.

11. (2, -3)



Find the specified value.

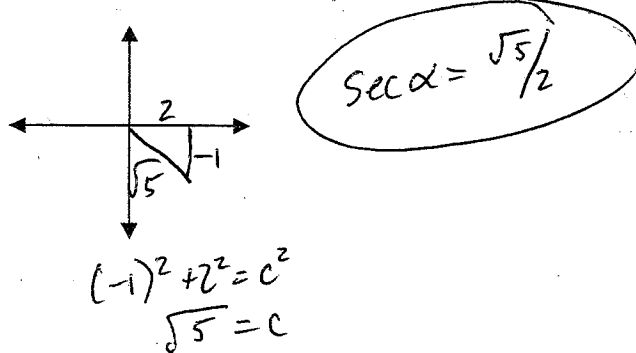
13. Find  $\cos \alpha$  in quadrant II if  $\csc \alpha = 8/7$



$(-6)^2 + 8^2 = c^2$   
 $c = 10$

$\sin \alpha = \frac{8}{10} = \frac{4}{5}$   
 $\cos \alpha = \frac{-6}{10} = -\frac{3}{5}$   
 $\tan \alpha = \frac{8}{-6} = -\frac{4}{3}$   
 $\csc \alpha = \frac{10}{8} = \frac{5}{4}$   
 $\sec \alpha = \frac{10}{-6} = -\frac{5}{3}$   
 $\cot \alpha = \frac{-6}{8} = -\frac{3}{4}$

14. Find  $\sec \alpha$  in quadrant IV if  $\tan \alpha = -1/2$

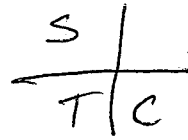


State the quadrant(s) in which  $\alpha$  lies given the following conditions.

II 15.  $\sin > 0$  and  $\tan < 0$

I 16.  $\cot > 0$  and  $\sec > 0$

II, IV 17.  $\cos \alpha$  and  $\sin \alpha$  have opposite signs



18. State the reference angle.

a.  $\sin 150^\circ$   $\sin 30^\circ$

e.  $\cos 430^\circ$   $\cos 70^\circ$

i.  $\sin 310^\circ$   $-\sin 50^\circ$

b.  $\cos 200^\circ$   $-\cos 20^\circ$

f.  $\cot (-200^\circ)$   $-\cot 20^\circ$

j.  $\tan 600^\circ$   $\tan 60^\circ$

c.  $\tan 150^\circ$   $-\tan 30^\circ$

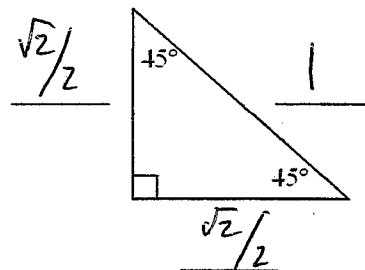
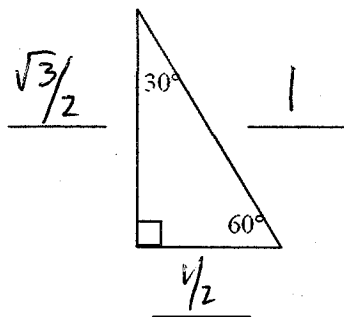
g.  $\sec 130^\circ$   $-\sec 50^\circ$

k.  $\csc 190^\circ$   $-\csc 10^\circ$

d.  $\sec 100^\circ$   $-\sec 80^\circ$

h.  $\cos 245^\circ$   $-\cos 65^\circ$

19. If each triangle is drawn in a unit circle, state the length of each side.



20. Complete the chart with the exact values.

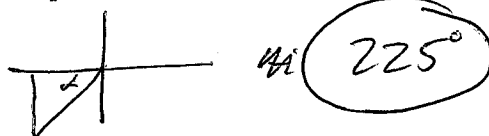
	$0^\circ$	$30^\circ$	$45^\circ$	$60^\circ$	$90^\circ$	$180^\circ$	$270^\circ$
$\sin \alpha$	0	$1/2$	$\sqrt{2}/2$	$\sqrt{3}/2$	1	0	-1
$\cos \alpha$	1	$\sqrt{3}/2$	$\sqrt{2}/2$	$1/2$	0	-1	0
$\tan \alpha$	0	$\sqrt{3}/3$	1	$\sqrt{3}$	und.	0	und.

21. 1) State the reference angle  
2) State the exact value

- a.  $\sin 210^\circ$  1)  $-\sin 30^\circ$  2)  $-\frac{1}{2}$   
b.  $\cos 135^\circ$  1)  $-\cos 45^\circ$  2)  $-\frac{\sqrt{2}}{2}$   
c.  $\cot 225^\circ$  1)  $\cot 45^\circ$  2)  $1$   
d.  $\sec 135^\circ$  1)  $-\sec 45^\circ$  2)  $-\sqrt{2}$   
e.  $\cos 225^\circ$  1)  $-\cos 45^\circ$  2)  $-\frac{\sqrt{2}}{2}$   
f.  $\tan 300^\circ$  1)  $-\tan 60^\circ$  2)  $-\sqrt{3}$   
g.  $\tan 225^\circ$  1)  $\tan 45^\circ$  2)  $1$   
h.  $\cos 570^\circ$  1)  $-\cos 30^\circ$  2)  $-\frac{\sqrt{3}}{2}$   
i.  $\csc 270^\circ$  1)  $—$  2)  $-1$   
j.  $\sin \frac{3\pi^R}{4}$  1)  $\sin 45^\circ$  2)  $\frac{\sqrt{2}}{2}$   
k.  $\csc \frac{\pi^R}{3}$  1)  $\csc 60^\circ$  2)  $\frac{2\sqrt{3}}{3}$   
l.  $\sin \frac{11\pi^R}{4}$  1)  $\sin 45^\circ$  2)  $\frac{\sqrt{2}}{2}$   
m.  $\tan \frac{2\pi^R}{3}$  1)  $-\tan 60^\circ$  2)  $-\sqrt{3}$

22. Find the measure of angle  $\alpha$  where  $0 \leq \alpha \leq 360$  meets the following conditions.

- a.  $\sin \alpha = \frac{-\sqrt{2}}{2}$  and  $\alpha$  lies in quadrant III.



- b.  $\cos \alpha = \frac{1}{2}$  and  $\sin \alpha < 0$ .

