

Pre-Calculus

Write your questions here!



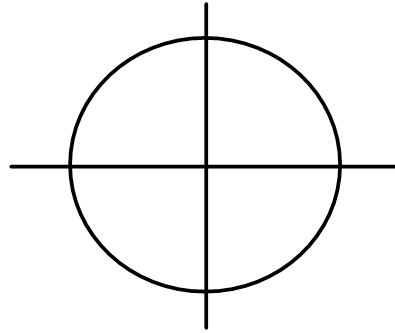
Reference Angles-

$\sin 40^\circ$

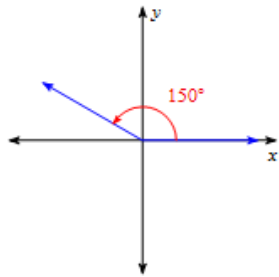
$\sin 140^\circ$

$\sin 220^\circ$

$\sin 320^\circ$



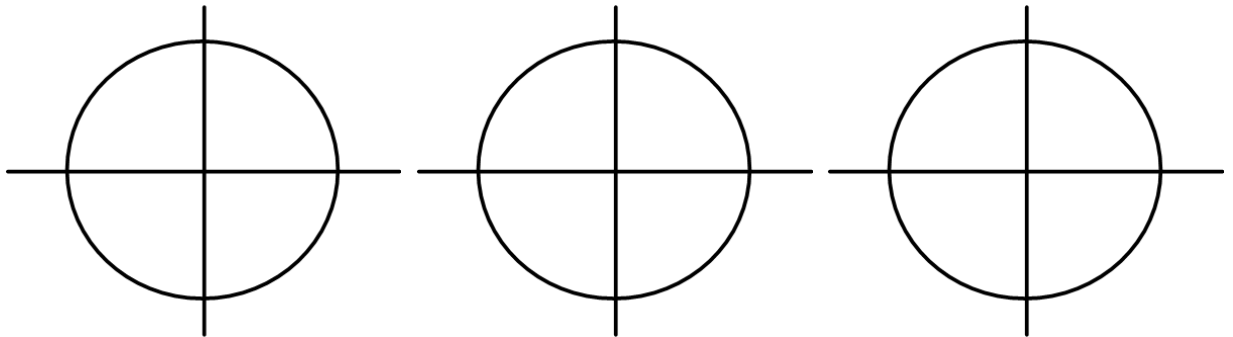
Find the Reference Angle



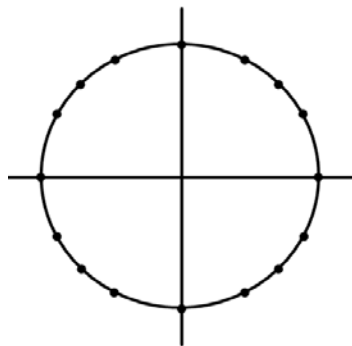
-100°

$\frac{23\pi}{12}$

SPECIAL ANGLES



FIND THE EXACT VALUE!

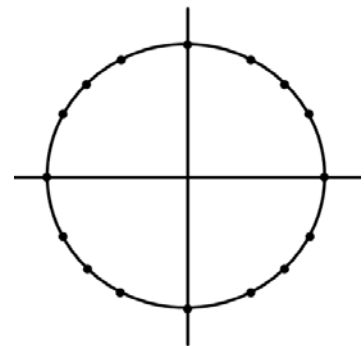


$\cos 120^\circ =$

$\sin 210^\circ =$

$\tan 315^\circ =$

$\sec 180^\circ =$



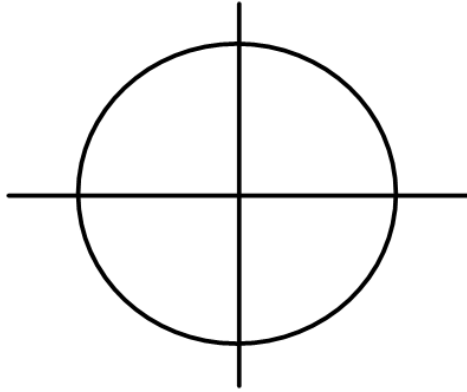
$\sin \frac{5\pi}{4} =$

$\cos \left(-\frac{2\pi}{3} \right) =$

$\cot \frac{\pi}{4} =$

$\sec \frac{3\pi}{2} =$

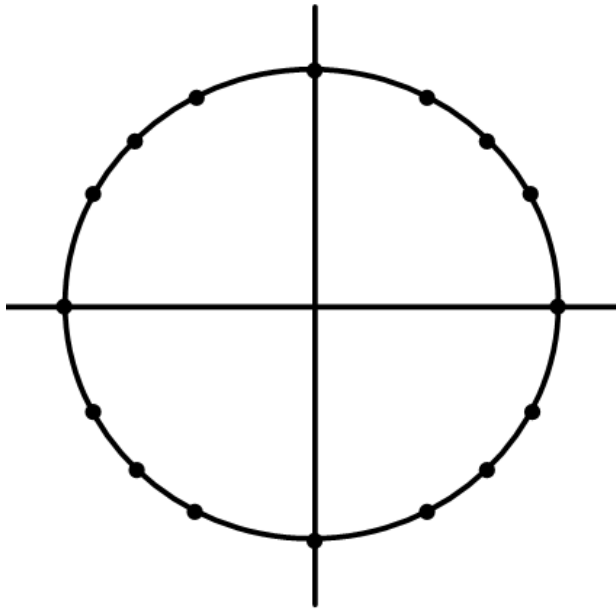
Find all 6 trig functions



degrees	radians	$\sin \theta$	$\cos \theta$	$\tan \theta$	$\csc \theta$	$\sec \theta$	$\cot \theta$	- degree	- radian
30°									

degrees	radians	$\sin \theta$	$\cos \theta$	$\tan \theta$	$\csc \theta$	$\sec \theta$	$\cot \theta$	- degree	- radian
	$\frac{\pi}{2}$								

If $0^\circ \leq \theta \leq 360^\circ$, then find θ



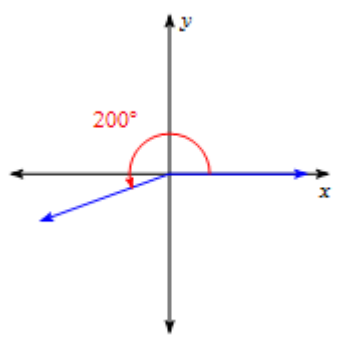
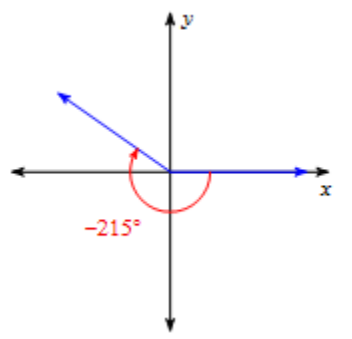
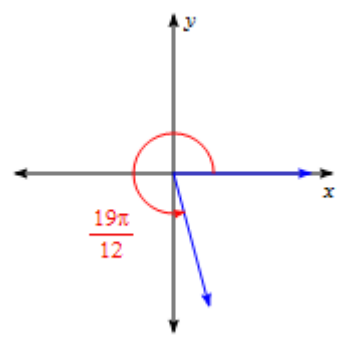
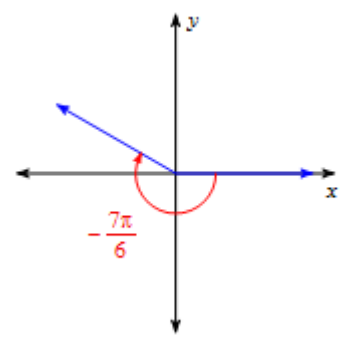
- $\sin \theta = \frac{1}{2}$
- $\cos \theta = \frac{1}{2}$
- $\tan \theta = -1$
- $\sin \theta = \frac{\sqrt{3}}{2}$
- $\cos \theta = 0$
- $\cot \theta = \text{undefined}$

SUMMARY:

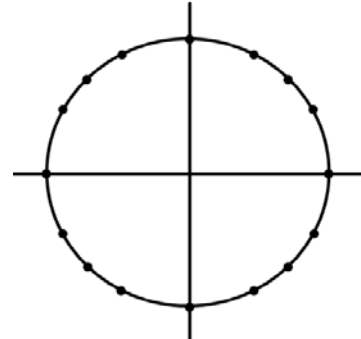
Now,
summarize
your notes
here!



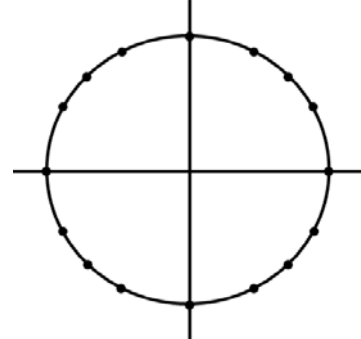
Find the reference angle.

<p>1.</p> 	<p>2.</p> 	<p>3.</p> 	<p>4.</p> 
<p>5. -130°</p>	<p>6. 230°</p>	<p>7. $-\frac{13\pi}{9}$</p>	<p>8. $\frac{3\pi}{4}$</p>

Find the exact value.

<p>9. $\sin 90^\circ =$</p>	<p>10. $\cos 120^\circ =$</p>	<p>11. $\tan 45^\circ =$</p>	
<p>12. $\tan 120^\circ =$</p>	<p>13. $\cos 225^\circ =$</p>	<p>14. $\sin 135^\circ =$</p>	
<p>15. $\sin 330^\circ =$</p>	<p>16. $\tan 315^\circ =$</p>	<p>17. $\cos 240^\circ =$</p>	
<p>18. $\sin(-225^\circ) =$</p>	<p>19. $\cos(-240^\circ) =$</p>	<p>20. $\tan(-300^\circ) =$</p>	
<p>21. $\sec(180^\circ) =$</p>	<p>22. $\csc(-270^\circ) =$</p>	<p>23. $\cot(-315^\circ) =$</p>	

Find the exact value.

<p>24. $\sin \frac{\pi}{2} =$</p>	<p>25. $\tan \frac{\pi}{4} =$</p>	<p>26. $\cos \frac{3\pi}{2} =$</p>	
<p>27. $\cos \frac{4\pi}{3} =$</p>	<p>28. $\cos \frac{\pi}{6} =$</p>	<p>29. $\tan \pi =$</p>	
<p>30. $\sin \frac{5\pi}{4} =$</p>	<p>31. $\cos \frac{5\pi}{3} =$</p>	<p>32. $\sin \frac{5\pi}{6} =$</p>	
<p>33. $\tan \frac{7\pi}{4} =$</p>	<p>34. $\sin(-\pi) =$</p>	<p>35. $\tan\left(-\frac{3\pi}{2}\right) =$</p>	
<p>36. $\cos\left(-\frac{\pi}{3}\right) =$</p>	<p>37. $\sec\left(-\frac{\pi}{2}\right) =$</p>	<p>38. $\sin\left(-\frac{5\pi}{4}\right) =$</p>	

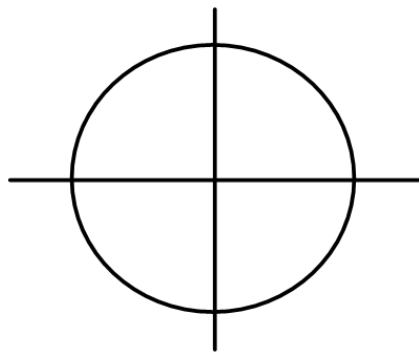
If $0^\circ \leq \theta \leq 360^\circ$, then find θ

39. $\sin \theta = \frac{1}{2}$	40. $\cos \theta = \frac{\sqrt{3}}{2}$	41. $\tan \theta = -\sqrt{3}$	If you like pictures of circles, you can draw one here!
42. $\sin \theta = \frac{\sqrt{2}}{2}$	43. $\cos \theta = -\frac{\sqrt{2}}{2}$	44. $\tan \theta = -\frac{\sqrt{3}}{3}$	
45. $\csc \theta = 2$	46. $\sec \theta = -2$	47. $\cot \theta = \text{undefined}$	

If $0\pi \leq \theta \leq 2\pi$, then find θ

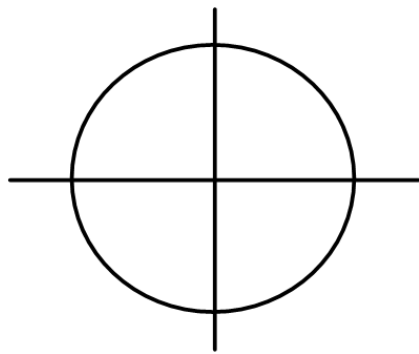
48. $\sin \theta = \frac{\sqrt{3}}{2}$	49. $\tan \theta = 1$	50. $\cos \theta = \frac{\sqrt{2}}{2}$	If you like pictures of circles, you can draw one here!
51. $\cos \theta = -\frac{1}{2}$	52. $\tan \theta = \sqrt{3}$	53. $\cos \theta = 0$	
54. $\csc \theta = \text{undefined}$	55. $\cot \theta = -1$	56. $\sin \theta = -\frac{1}{2}$	

57. Fill in the table below.



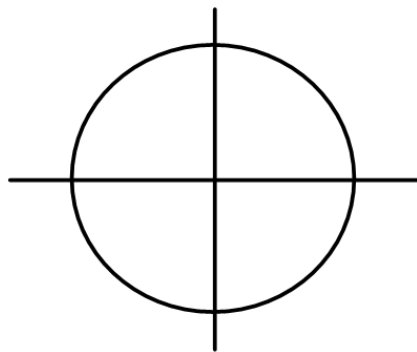
degrees	radians	$\sin \theta$	$\cos \theta$	$\tan \theta$	$\csc \theta$	$\sec \theta$	$\cot \theta$	- degree	- radian
240°									

58. Fill in the table below.



degrees	radians	$\sin \theta$	$\cos \theta$	$\tan \theta$	$\csc \theta$	$\sec \theta$	$\cot \theta$	- degree	- radian
									$-\frac{3\pi}{4}$

59. Fill in the table below.



degrees	radians	$\sin \theta$	$\cos \theta$	$\tan \theta$	$\csc \theta$	$\sec \theta$	$\cot \theta$	- degree	- radian
		$-\frac{1}{2}$	$\frac{\sqrt{3}}{2}$						

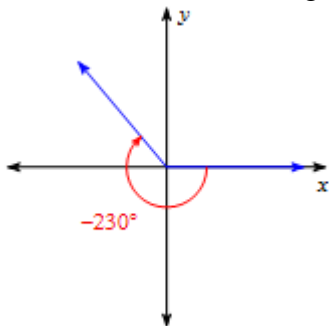
Skillz Review! Let's put some Trig in our Algebra!

COMPLEX FRACTION aka FRACTION IN A FRACTION		
$\frac{\left(\frac{2}{3}\right)}{\left(\frac{6}{5}\right)} =$	$\frac{\left(\frac{1}{\cos x}\right)}{\left(\frac{1}{\sin x}\right)} =$	$\frac{\sec \theta}{\tan \theta} =$
ADD/SUBTRACT FRACTIONS		
$\frac{2}{5} + \frac{4}{7} =$	$\frac{1}{\sin x} + \frac{1}{3} =$	$\tan \theta - \sec \theta =$

9.2 Reference and Special Angles

APPLICATION

1. Find the reference angle.



2. Find the exact value.

$$\cos \frac{7\pi}{6} =$$

3. Mr. Brust wants a table including every single special angle in a unit circle, but he is really lazy. On the back of the page he filled in a table for quadrant I and then took a nap. Use his info to fill in the rest of the table and quadrants II, III, and IV on the Unit Circle. Don't do any math! Just use your knowledge of reference angles to complete the table. You will need this table for the next section, so take your time and make it look pretty!

