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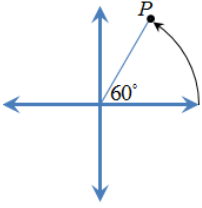
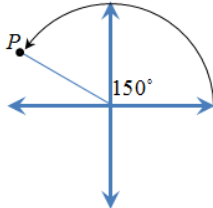
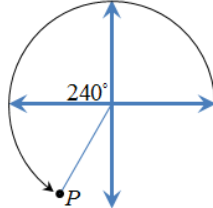
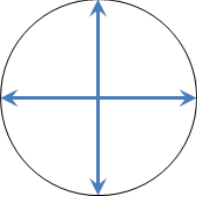
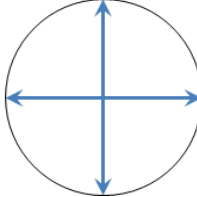
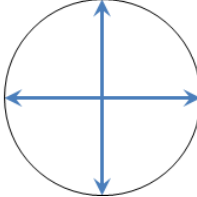
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**HW PC 11 Ch 2.2 Trig Ratios of Sine Cosine and Tangent Functions**

1. If  $\sin \theta$  is equal to a negative ratio, then which quadrants will the angle be? What if the ratio is positive, which quadrant is it in?
2. If  $\cos \theta$  is equal to a negative ratio, then which quadrants will the angle be? What if the ratio is positive, which quadrant is it in?
3. If  $\tan \theta$  is equal to a negative ratio, then which quadrants will the angle be? What if the ratio is positive, which quadrant is it in?
4. If  $\theta$  is in quadrant 3, then which trig ratio will be negative?  $\sin \theta$   $\cos \theta$  or  $\tan \theta$ ?
5. If  $\theta$  is in quadrant 4, then which trig ratio will be negative?  $\sin \theta$   $\cos \theta$  or  $\tan \theta$ ?
6. Determine each trig ratio without using a calculator.

a) $\cos 135^\circ$	b) $\tan 270^\circ$	c) $\sin 120^\circ$
d) $\tan 135^\circ$	e) $\cos 225^\circ$	f) $\sin 150^\circ$
g) $\tan 150^\circ$	h) $\sin(-300^\circ)$	i) $\cos 180^\circ$

7. A point "P" created by the endpoint of a terminal arm is on the circumference of an unit circle of radius 1. Given the angle in standard position, find the coordinates of point 'P'.

<p>a) <math>60^\circ</math></p> 	<p>b) <math>150^\circ</math></p> 	<p>c) <math>240^\circ</math></p> 
<p>d) <math>225^\circ</math></p> 	<p>e) <math>300^\circ</math></p> 	<p>f) <math>315^\circ</math></p> 

8. Given each trig ratio, find the specified trig ratio without using a calculator:

<p>a) <math>\sin \theta = 0.5</math></p> <p><math>\cos \theta =</math></p> <p><math>\tan \theta =</math></p>	<p>b) <math>\cos \theta = \frac{-\sqrt{2}}{2}</math></p> <p><math>\sin \theta =</math></p> <p><math>\tan \theta =</math></p>	<p>c) <math>\tan \theta = -\sqrt{3}</math></p> <p><math>\cos \theta =</math></p> <p><math>\sin \theta =</math></p>
<p>d) <math>\sin \theta = \frac{1}{\sqrt{2}}</math></p> <p><math>\cos \theta =</math></p> <p><math>\tan \theta =</math></p>	<p>e) <math>\cos \theta = \frac{-\sqrt{3}}{2}</math></p> <p><math>\sin \theta =</math></p> <p><math>\tan \theta =</math></p>	<p>f) <math>\tan \theta = \frac{1}{\sqrt{3}}</math></p> <p><math>\cos \theta =</math></p> <p><math>\sin \theta =</math></p>

9. Solve for  $\theta$ , with  $0 \leq \theta \leq 360^\circ$ .

<p>a) <math>\sin \theta = 0.8</math></p>	<p>b) <math>\cos \theta = 0.85</math></p>	<p>c) <math>\tan \theta = 0.3</math></p>
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a) $\sin \theta = -0.9$	b) $\cos \theta = 0.125$	c) $\tan \theta = 0.25$
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10. The point  $(-3,5)$  is on the terminal arm of angle  $\theta$  in standard position. Find the angle in radians to one decimal place .

11. The angle  $\theta$  is in the third quadrant and  $\cos \theta = -\frac{4}{5}$  . Draw a diagram to show the angle in standard position and then find the coordinates for "P"

12. If  $\tan \theta = -\frac{2}{\sqrt{7}}$  , angle  $\theta$  is in standard position, and its terminal arm is in quadrant II. What is the exact value of  $\cos \theta$ ?

13. If  $\sin \theta = -\frac{2}{7}$  , draw a diagram to show the angle(s) in standard position and the possible coordinates for point "P". Then determine the value(s) of  $\cos \theta$  and  $\tan \theta$

14. Point  $P(3,-5)$  is on the terminal arm of an angle in standard position. What is the value of  $\sin \theta \times \cos \theta$ ?

15. What is the value of  $\sin \theta \times \tan \theta$  if point  $P(1.957, -0.412)$  is on the terminal arm of a circle with a radius of 2 units long?

16. If  $\cos \theta = \frac{2a}{3}$ , then what is the value of  $\tan \theta$  in terms "a"?