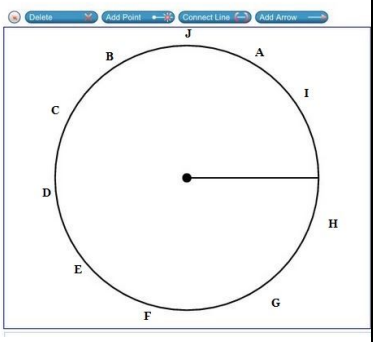
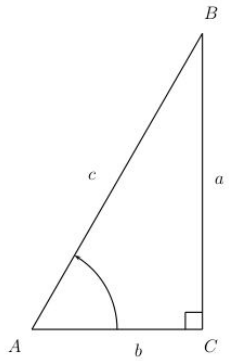
SM3. A5E Conversions & Length of Arcs	Name
1. Find the measure of the angle that is coterminal to the angle. (Get the angle back to the equivalent version in the first rotation.) a) 600^o = b) -225^o c) 675^o	2. Find the measure of the angle that is coterminal to the angle. (Get the angle back to the equivalent version in the first rotation.) a) $\frac{11\pi}{4}$ = b) $\frac{-5\pi}{6}$ c) $\frac{11\pi}{3}$
3. The point (3,-5) is on the terminal side of an angle in standard position. Determine the exact value of the six trig functions.	4. Convert the following from degrees to radians. a) 130^o = b) 175^o c) 205^o d) -235^o
5. Convert from Radians to Degrees a) $\frac{5\pi}{7}$ b) $\frac{13\pi}{8}$ c) 1.4 d) 2.7	6. Approximate which letter corresponds with the following radian measures a) 2.5 radian. b) 1 radians c) 6 radians Draw a single segment that will complete a central angle measuring approximately 1 radian. 

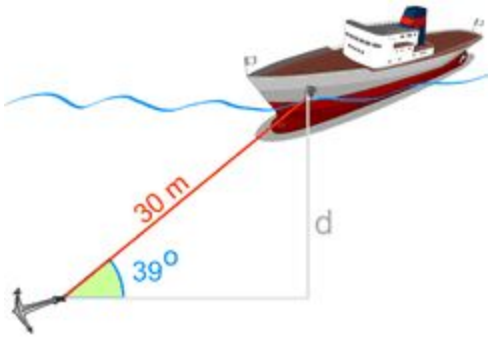
7. Given the $cos\theta = -\frac{5}{6}$, and you are in Quadrant III, find the value of the 6 trig functions.	8. Solve the following triangle when b = 6 and c = 15.  Angle A= Angle B = Side a=

Find the exact value of each expression.

7. $sin(\frac{8\pi}{3})$	8. $cos(\frac{-5\pi}{6})$	9. $tan(-150^o)$	10. $sec\left(\frac{5\pi}{4}\right)$
11. $csc(-45^o)$	12. $cot\left(\frac{7\pi}{6}\right)$	13. $sin\left(\frac{-\pi}{2}\right)$	14. $csc(\pi)$
15. $cot(\frac{5\pi}{2})$	16. $cos\left(\frac{3\pi}{2}\right)$	17. $sec\left(\frac{\pi}{2}\right)$	18. $cot(0)$

19. Given the $\tan\theta = -\sqrt{3}$ and you are in Quadrant II, find the exact value of the six trig functions.	20. Rationalize the following: $\frac{2}{\sqrt{3}}$

21. Find the depth of the water.



22. A tall building cast a shadow that is approximately 1000ft when the Sun's angle of depression is 33^o. How tall is the building?

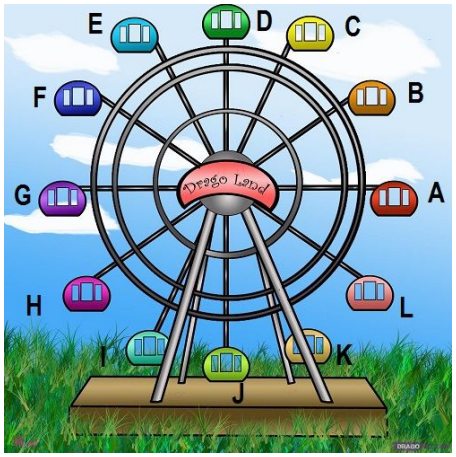
23. A study says the mean amount of cream filling in a double stuffed Oreo is 1.7 ounces, with a standard deviation of 0.15 ounces.
You wonder if this is really correct, or if Oreos have started ripping you off. You do a sample of 40 Oreos, and find a mean of 1.55 ounces.

A. Calculate the Margin of Error.
$ME = 1.96\left(\frac{s}{\sqrt{n}}\right)$

B. Use your margin of error to calculate a 95% confidence interval. $CI = \bar{x} \pm ME$

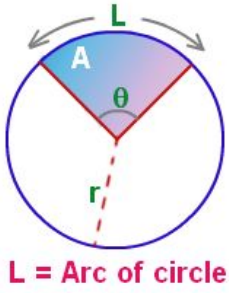
C. Based on your confidence interval, are you getting ripped off?

24. Find the distance from the car A to car E if the radius of the ferris wheel is 50 feet.



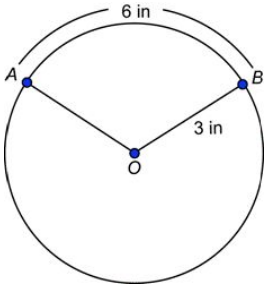
What would the distance be around the ferris wheel from G to I if the radius is 40 feet?

25. Find the length of the arc in the circle if the radian measure is $\frac{5\pi}{3}$ and the radius is 13cm.

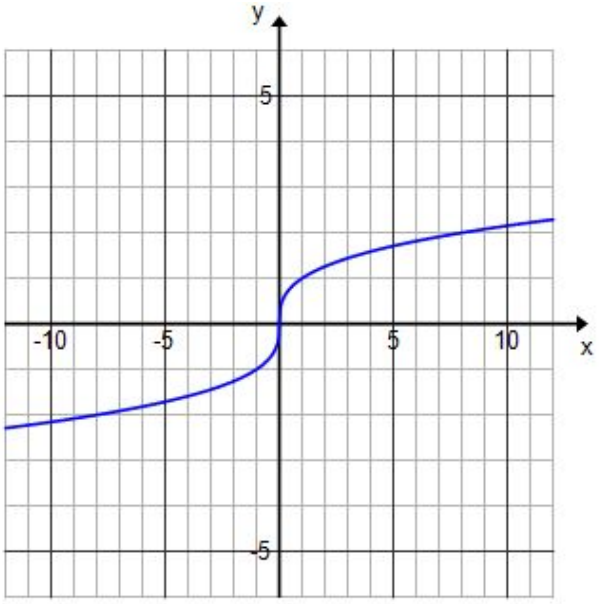


L = Arc of circle

26. Find the measure of the angle of this arc.

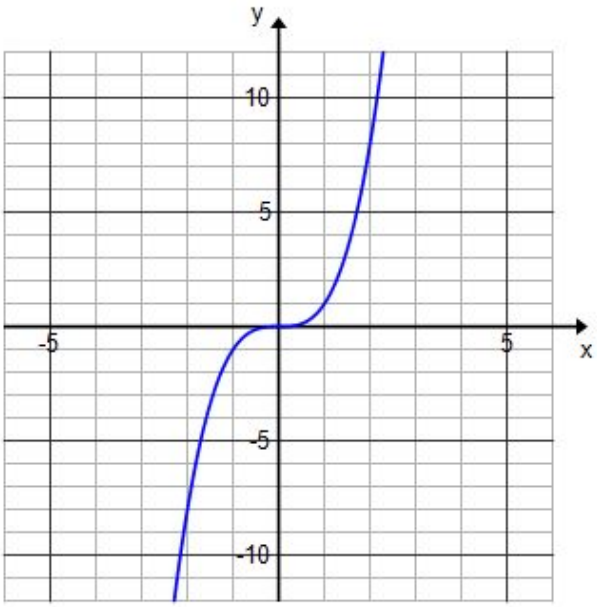


27. Graph the following transformations for $f(x) = \sqrt[3]{x}$



a) $g(x) = 2\sqrt[3]{x}$
b) $h(x) = \sqrt[3]{x} + 3$
c) $j(x) = \sqrt[3]{-x}$

28. Graph the following transformations for $f(x) = x^3$



d) $g(x) = -x^3$
e) $h(x) = (x-3)^3$
f) $j(x) = \frac{1}{2}x^3$

29. Solve for a by factoring out an a:
ax - 10a = x + 2