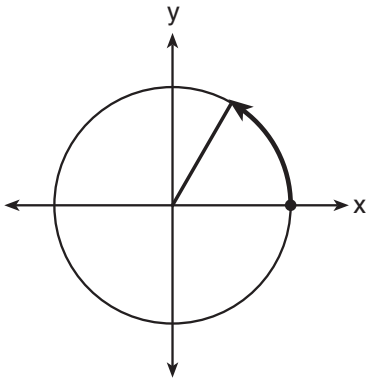
BECA / Huson / 11.1 IB Math SL Name:
30 May 2018

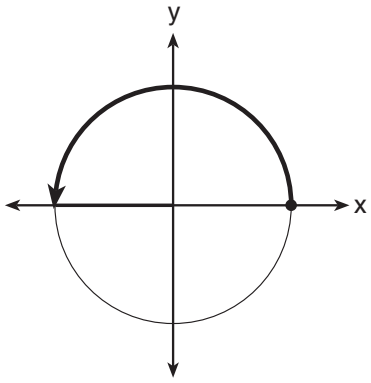
Algebra 2 Regents problems

Jan 2017

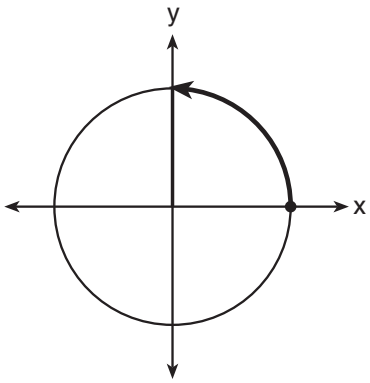
16 Which diagram shows an angle rotation of 1 radian on the unit circle?



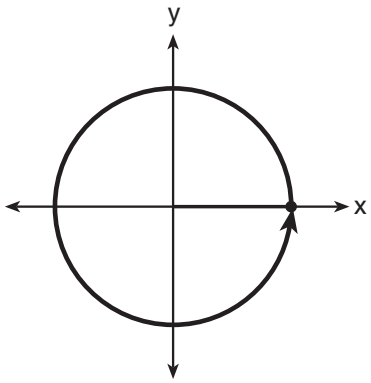
(1)



(3)



(2)



(4)

28 Using the identity $\sin^2\theta + \cos^2\theta = 1$, find the value of $\tan\theta$, to the *nearest hundredth*, if $\cos\theta$ is -0.7 and θ is in Quadrant II.

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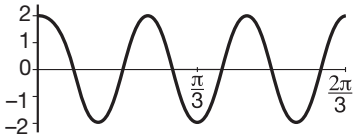
17 A circle centered at the origin has a radius of 10 units. The terminal side of an angle, θ, intercepts the circle in Quadrant II at point *C*. The *y*-coordinate of point *C* is 8. What is the value of cos θ?

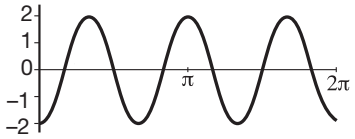
(1) $-\frac{3}{5}$ (3) $\frac{3}{5}$

(2) $-\frac{3}{4}$ (4) $\frac{4}{5}$

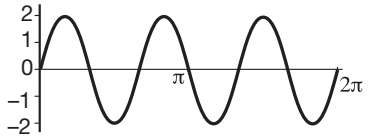
22 Which graph represents a cosine function with no horizontal shift, an amplitude of 2, and a period of $\frac{2\pi}{3}$?



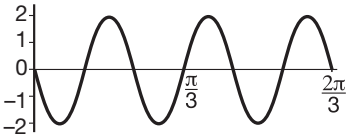
(1)



(3)

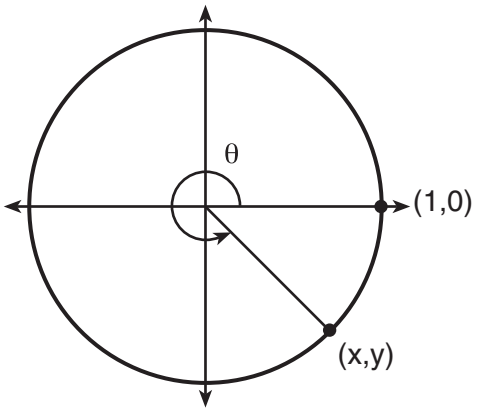


(2)



(4)

27 Using the unit circle below, explain why $\csc\theta = \frac{1}{y}$.



csc(x) = 1/sin(x)
sec(x) = 1/cos(x)
cot(x) = 1/tan(x)