

Math 1613 - Trigonometry

Exam #4 - 2010.10.28

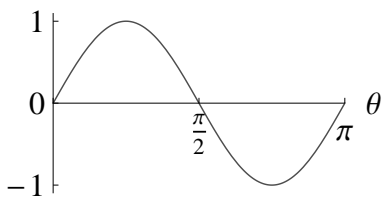
Solutions

1. Match the following functions to their corresponding graphs.

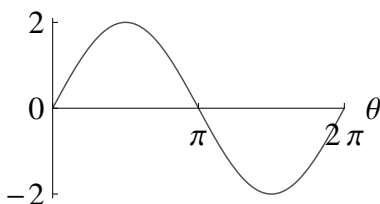
(F) $2 \cos(2\theta - \frac{\pi}{3})$ (E) $1 + \cos(\frac{\theta}{2})$ (H) $-2 \sin(2\theta + \frac{\pi}{3})$ (D) $1 - \cos(\theta)$ (B) $2 \sin(\theta)$

(A) $\sin(2\theta)$ (G) $-2 \cos(2\theta + \frac{\pi}{3})$ (I) $2 \sin(2\theta + \frac{\pi}{3})$ (C) $1 - \sin(\theta)$

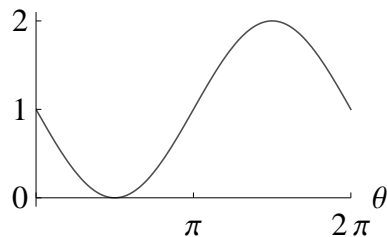
(A)



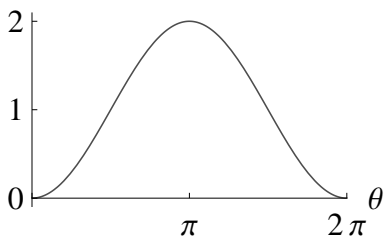
(B)



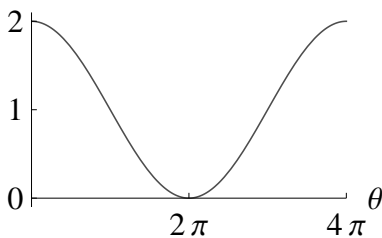
(C)



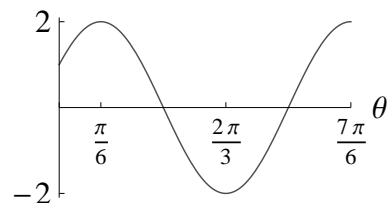
(D)



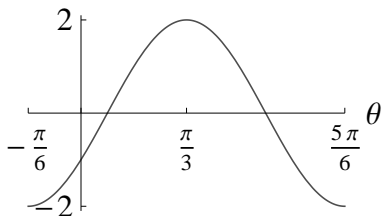
(E)



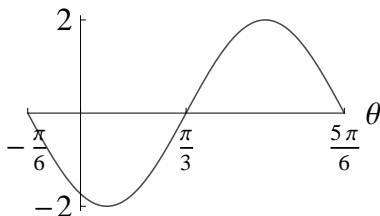
(F)



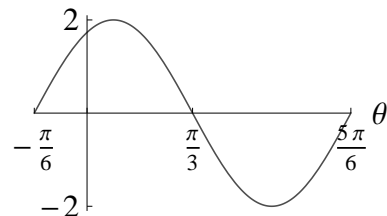
(G)



(H)



(I)



2. Match the following functions to their corresponding graphs.

(E) $1 + \cot(2\theta)$

(D) $1 - \tan(2\theta)$

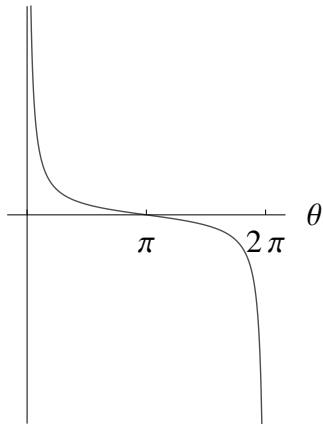
(B) $\tan\left(\frac{\theta}{2}\right)$

(F) $-1 + \tan(2\theta)$

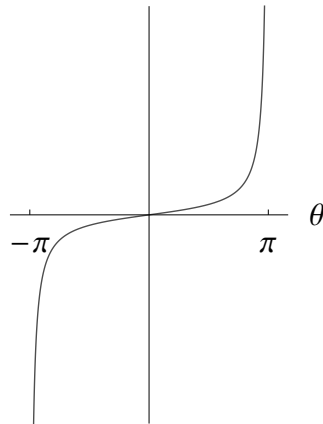
(A) $\cot\left(\frac{\theta}{2}\right)$

(C) $\tan\left(\theta - \frac{\pi}{6}\right)$

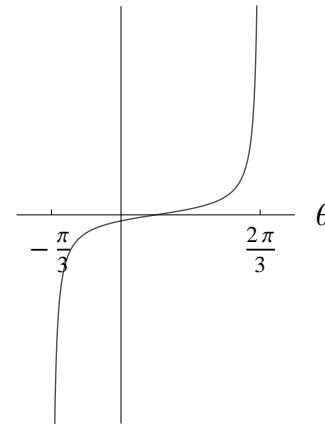
(A)



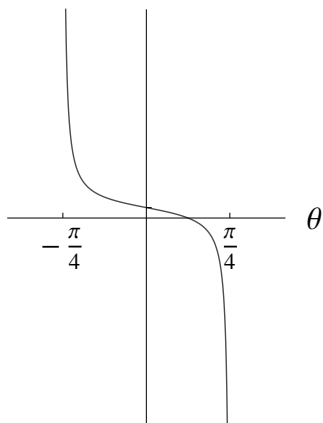
(B)



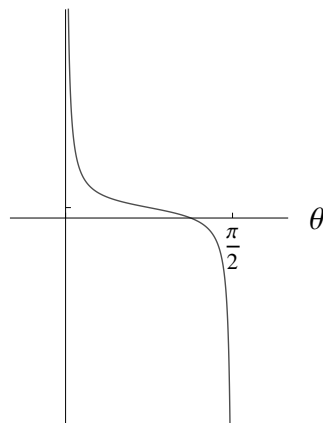
(C)



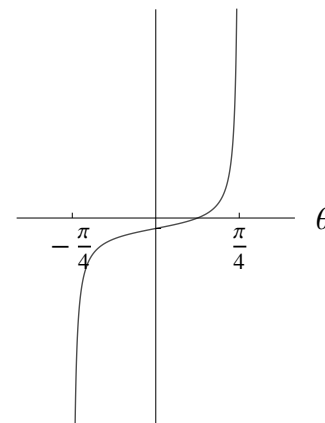
(D)



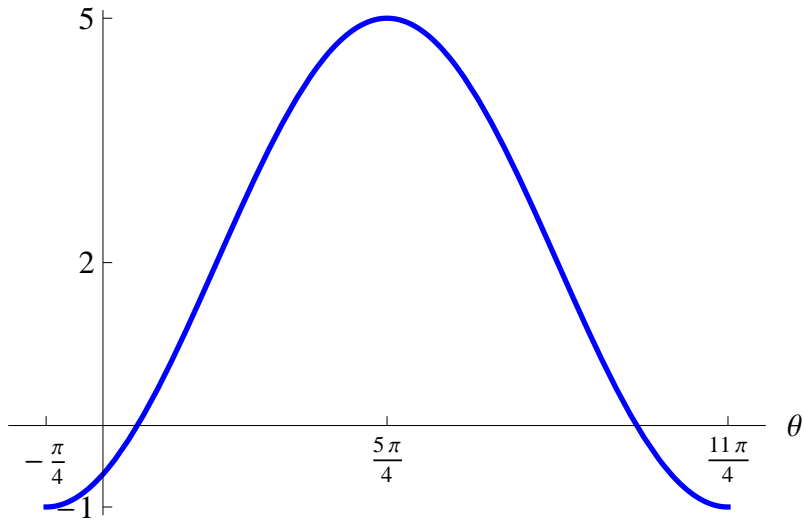
(E)



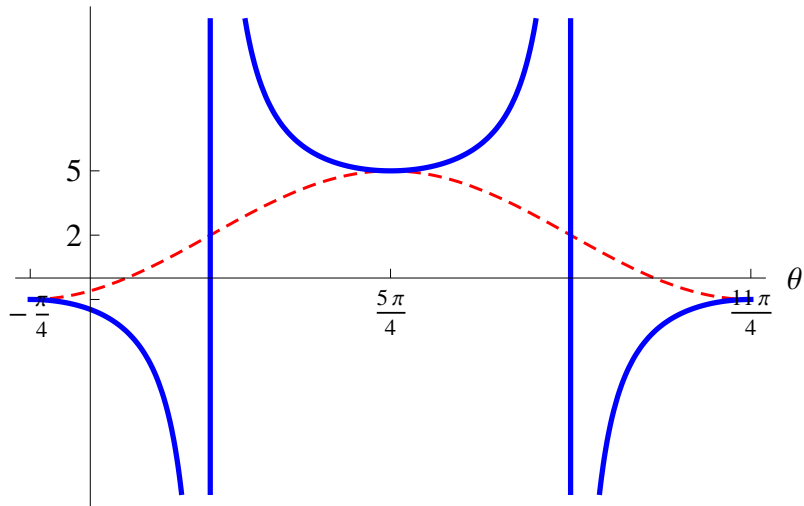
(F)



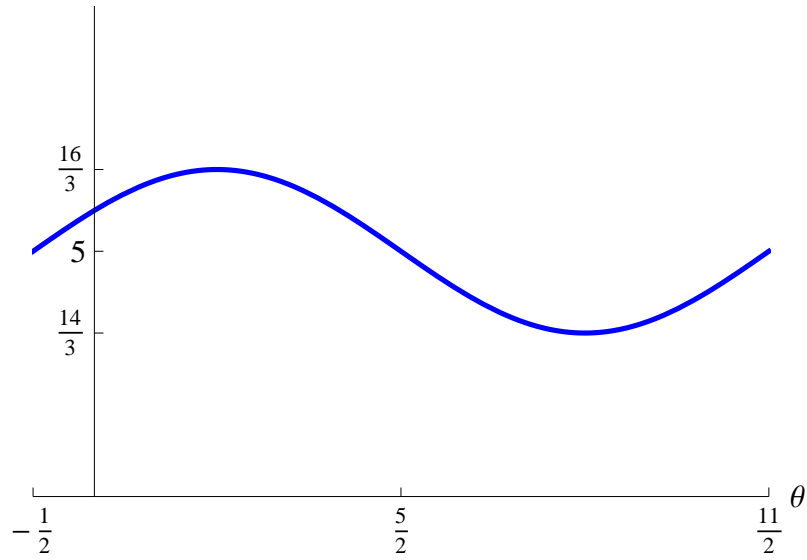
3. Graph the function $y = 2 - 3 \cos\left(\frac{2}{3}x + \frac{\pi}{6}\right)$. Be sure to include all important information on your graph.



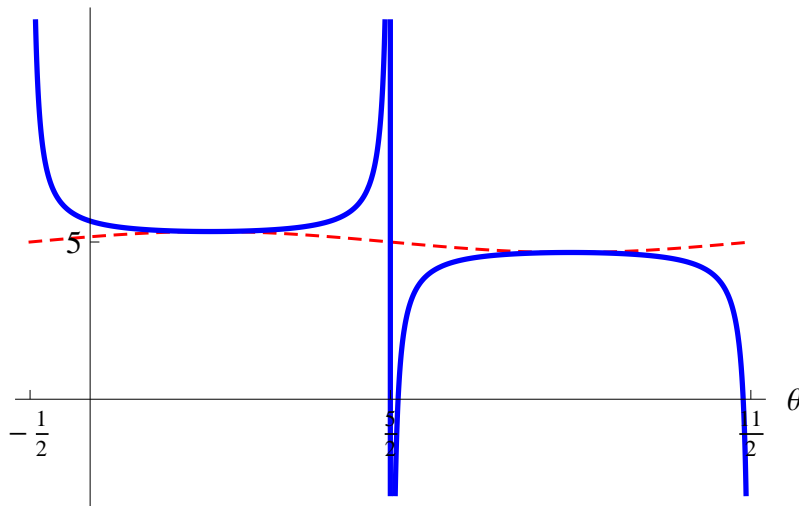
4. Graph the function $y = 2 - 3 \sec\left(\frac{2}{3}x + \frac{\pi}{6}\right)$. Be sure to include all important information on your graph.



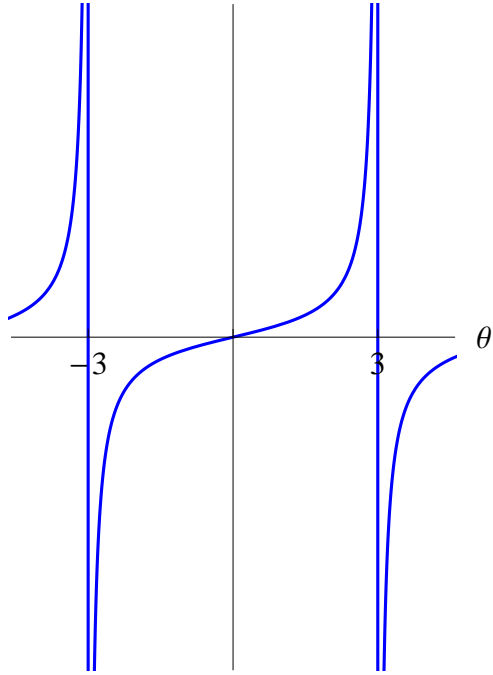
5. Graph the function $y = 5 + \frac{1}{3} \sin\left(\frac{\pi}{3}x + \frac{\pi}{6}\right)$. Be sure to include all important information on your graph.



6. Graph the function $y = 5 + \frac{1}{3} \csc\left(\frac{\pi}{3}x + \frac{\pi}{6}\right)$. Be sure to include all important information on your graph.



7. Graph the function $y = \frac{1}{3} \tan\left(\frac{\pi}{6}x\right)$. Be sure to include all important information on your graph.



8. Graph the function $y = \frac{1}{3} \cot\left(\frac{2}{3}x - \frac{\pi}{12}\right)$. Be sure to include all important information on your graph.

