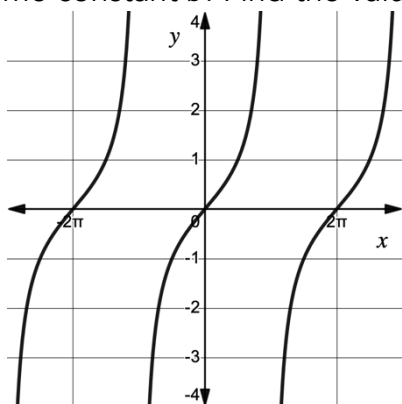
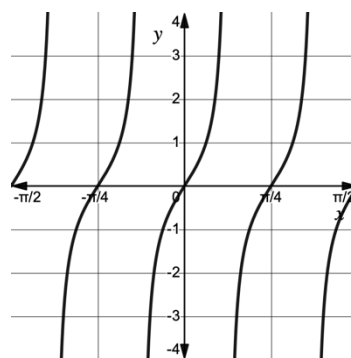


A graph of  $f(x) = \tan(bx)$  is shown for some constant  $b$ . Find the value of  $b$ .



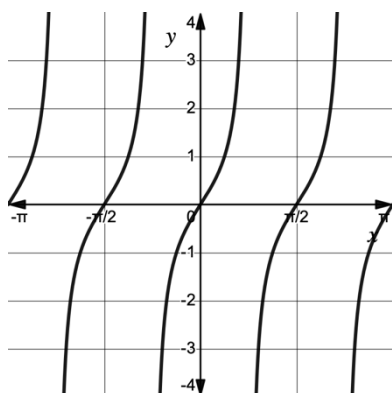
 CALC MEDIC

A graph of  $g(x) = \tan(bx)$  is shown for some constant  $b$ . Find the value of  $b$ .



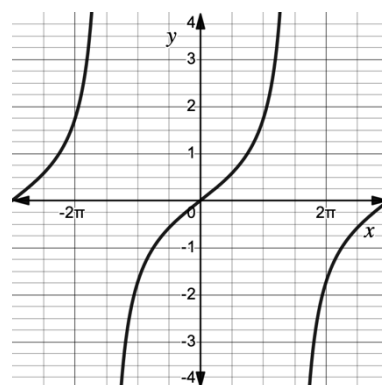
 CALC MEDIC

A graph of  $j(x) = \tan(bx)$  is shown for some constant  $b$ . Find the value of  $b$ .



 CALC MEDIC

A graph of  $h(x) = \tan(bx)$  is shown for some constant  $b$ . Find the value of  $b$ .



 CALC MEDIC

Two angles,  $\theta$  and  $\lambda$ , are in standard position. If  $\theta = \frac{2\pi}{3}$  and  $\lambda = \frac{5\pi}{6}$ , which terminal ray is steeper: the terminal ray of  $\theta$  or the terminal ray of  $\lambda$ ?

 CALC MEDIC

Which of the following angles have a terminal ray whose slope is less than 1?

- A)  $\theta = \frac{3\pi}{16}$
- B)  $\theta = \frac{4\pi}{16}$
- C)  $\theta = \frac{5\pi}{16}$
- D)  $\theta = \frac{7\pi}{16}$

 CALC MEDIC

Evaluate  $\tan\left(\frac{5\pi}{4}\right)$ .



Evaluate  $\tan\left(\frac{11\pi}{12}\right)$ .



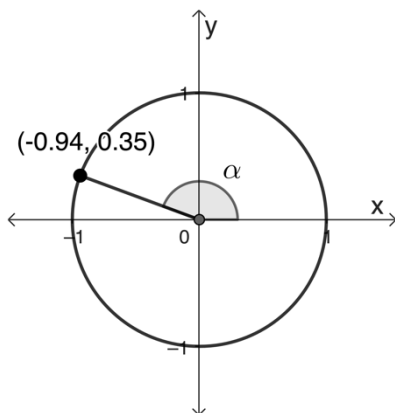
Evaluate  $\tan\left(\frac{2\pi}{3}\right)$ .



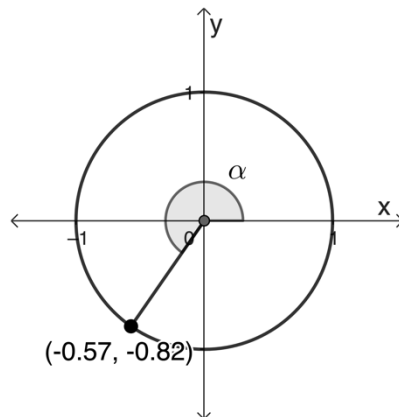
Evaluate  $\tan(7\pi)$ .



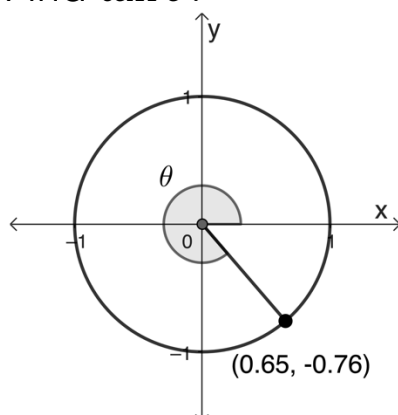
Find  $\tan \alpha$ .



Find  $\tan \alpha$ .



Find  $\tan \theta$ .



 CALC MEDIC

Let  $f(x) = \tan x$ . On which of the following intervals is  $f$  increasing?

- A)  $-\frac{3\pi}{2} < x < -\frac{\pi}{2}$
- B)  $0 < x < \frac{\pi}{2}$
- C)  $\frac{5\pi}{2} < x < \frac{7\pi}{2}$
- D) All of the above

 CALC MEDIC

Let  $f(x) = \tan x$ . On which of the following intervals is  $f$  decreasing?

- A)  $0 < x < \pi$
- B)  $\frac{\pi}{2} < x < \frac{3\pi}{2}$
- C)  $-\frac{\pi}{2} < x < 0$
- D) None of the above

 CALC MEDIC

Let  $f(x) = \tan x$ . On which of the following intervals is  $f$  increasing at a decreasing rate?

- A)  $0 < x < \pi$
- B)  $\frac{\pi}{2} < x < \frac{3\pi}{2}$
- C)  $-\frac{\pi}{2} < x < 0$
- D) None of the above

 CALC MEDIC

Let  $f(x) = \tan x$ . On which of the following intervals is  $f$  increasing at an increasing rate?

- A)  $2\pi < x < 3\pi$
- B)  $4\pi < x < \frac{9\pi}{2}$
- C)  $\frac{\pi}{2} < x < \pi$
- D) All of the above

 CALC MEDIC

Which of the following functions will produce an equivalent graph to  $y = \tan x$ ?

- A)  $f(x) = \tan\left(x - \frac{\pi}{2}\right)$
- B)  $f(x) = -\tan x$
- C)  $f(x) = \tan x + 2$
- D)  $f(x) = \tan(x + \pi)$

 CALC MEDIC

Let  $g(x) = 5 + 2 \tan x$ . Describe the vertical asymptotes of the graph of  $g$ .



The graph of a function  $h$  is obtained by shifting the graph of  $y = \tan x$  down 3 units. Which of the following is a solution to the equation  $h(x) = -2$ ?

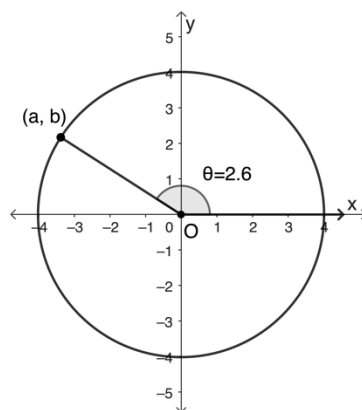
- A)  $x = 0$
- B)  $x = \frac{\pi}{4}$
- C)  $x = \frac{\pi}{2}$
- D)  $x = \frac{3\pi}{4}$



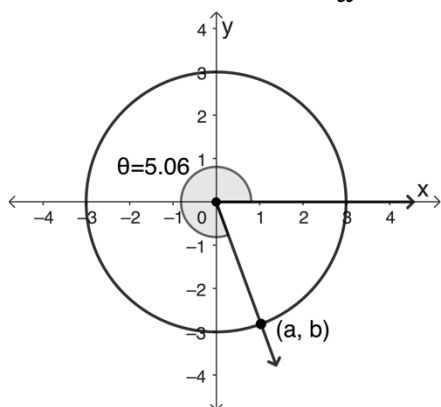
A point  $P$  is on the terminal ray of an angle whose measure is 4.1 radians. Find the ratio of the vertical displacement of  $P$  to the horizontal displacement of  $P$ .



Find the value of  $\frac{b}{a}$ .



Find the value of  $\frac{b}{a}$ .



Compare the domains of  $f(x) = \sin x$ ,  $g(x) = \cos x$ , and  $h(x) = \tan x$ .



Give the two smallest, non-zero  $x$  –intercepts of the graph of  $f(x) = \tan(2x)$ .



Give the two smallest, non-zero  $x$  –intercepts of the graph of  $f(x) = \tan(4x)$ .



Give the two smallest, non-zero  $x$  –intercepts of the graph of  $g(x) = -2 \tan\left(\frac{1}{2}x\right)$ .



Give the two smallest, non-zero  $x$  –intercepts of the graph of  $h(x) = 6 \tan\left(\frac{1}{3}x\right)$ .



Find the period of  $y = 4 \tan(1.5\pi x)$ .



Find the period of  $y = \tan\left(\frac{\pi}{6}(x - 3)\right)$ .

