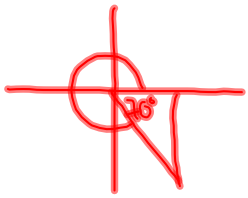
Test #1 Solutions:

1. III
2. IV
3. 45°
4. 30°
5. 210°
6. −315°
7. $\frac{3\pi}{4}$
8. $\frac{5\pi}{2}$
9. $-\frac{1}{\sqrt{2}}$
10. 1
11. 0
12. $\frac{2}{\sqrt{3}}$
13. *undefined*
14. $\frac{1}{\sqrt{3}}$
15. $-\frac{4}{5}$
16. $\frac{4}{3}$
17. $-\frac{2}{5}$
18. $-\frac{2}{\sqrt{29}}$
19. $\frac{1}{\sin 20°}$
20. $\cos 20°$
21. $-\cos 20°$
22. $+\frac{1}{\sin 20°}$
23. $210\pi\ cm$
24. $\frac{5280}{\pi}\ rev/min$
25. $\frac{370}{\sqrt{3}}\ ft$

22. $\sec 290°$



$= \sec 70°$

$= \csc 20°$

$= \frac{1}{\sin 20°}$

$y = af(bx)$

amplitude / "amp" of ref pts.
$= |a|$

period $= \frac{\pi \text{ or } 2\pi}{|b|}$

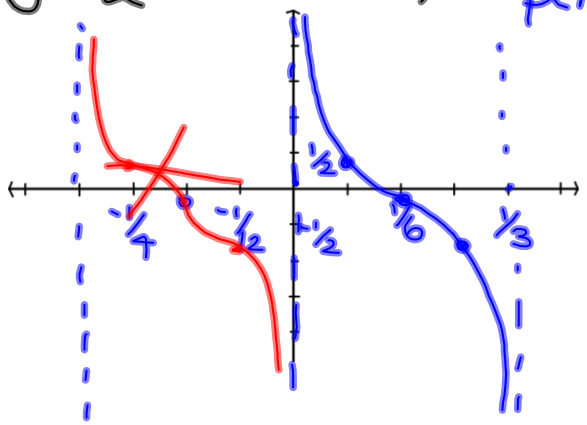
tan cot sin cos sec csc

If $a < 0$, vertical flip

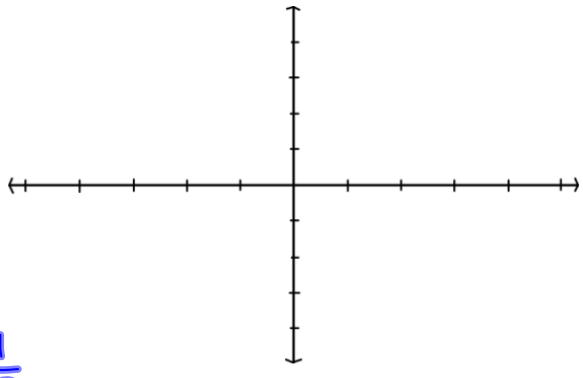
$y = \frac{1}{2}\cot 3\pi x$

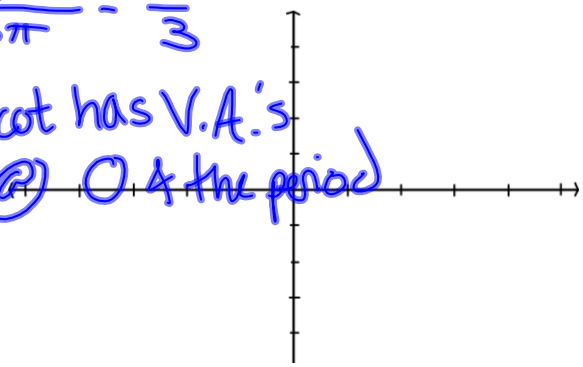
amp: $\frac{1}{2}$

per: $\frac{\pi}{3\pi} = \frac{1}{3}$



* cot has V.A.'s @ 0 & the period

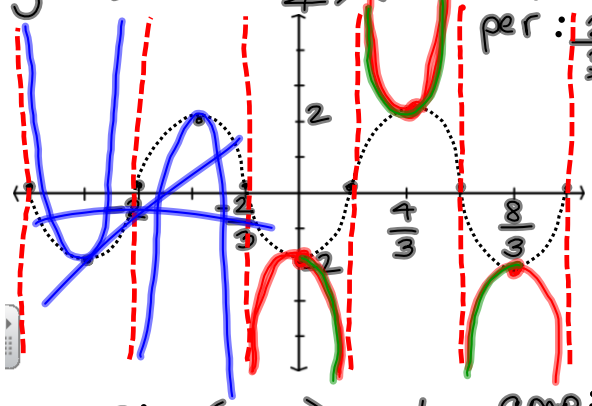




$y = -2\sec\frac{3\pi}{4}x$

amp: 2

per: $\frac{2\pi}{\frac{3\pi}{4}} = \frac{2\pi}{1}\cdot\frac{4}{3\pi} = \frac{8}{3}$



$y = a f(bx)$ ✓

Goal: $y = af(bx+c)+d$

$y = f(x+c)+d$

c = horizontal shift

$c>0$ left $c<0$ right

d = vertical shift

$d>0$ up, $d<0$ down

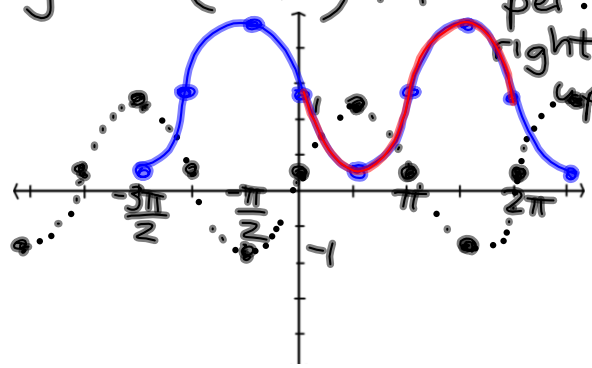
$y = \sin(x-\pi)+1$

amp: 1

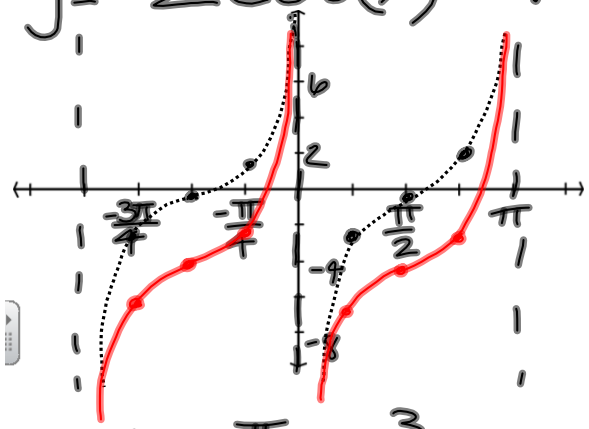
per: 2π

right π 2 ticks

up 1 2 ticks



$y = -2\cot(x) - 4$



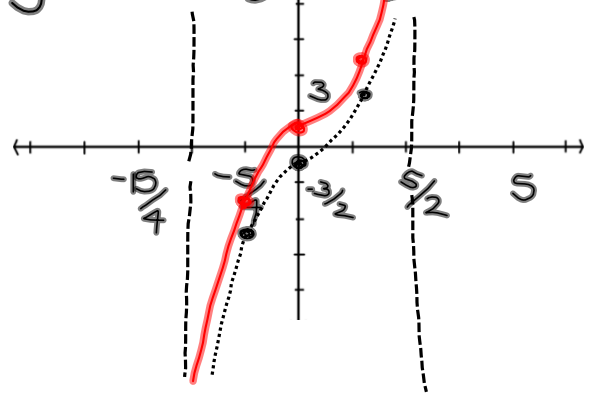
amp: 2

per: π

h.shift: none

v.shift: down 4 2 ticks

$y = 3\tan\frac{\pi}{5}x + \frac{3}{2}$



amp: 3

per: $\frac{\pi}{\pi/5} = \frac{\pi}{1}\cdot\frac{5}{\pi} = 5$

h.shift: none

v.shift: up 3/2 1 tick