

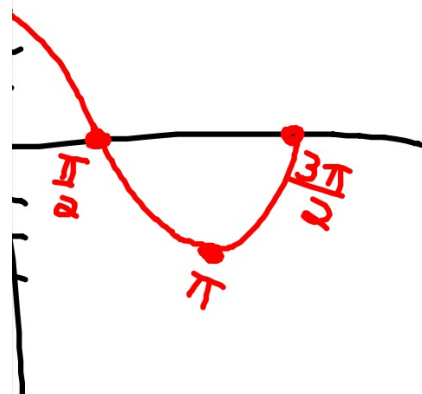
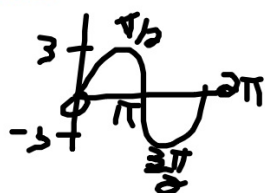
$$= 3\sin(\theta + \frac{\pi}{2})$$

Γ Chgs: $\angle \pi/2$

Asm: none

$(0, 3)(\pi/2, 0)$

$(3\pi/2, 0)$



$$2.) y = \tan \frac{1}{2} \theta$$

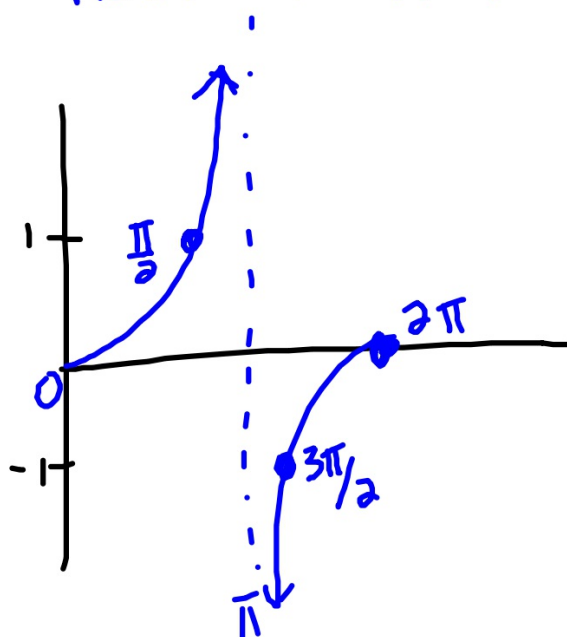
$Pd: 2\pi$

Chgs: none

Amp: none

Asm: π

$As: (0, 0)(\pi/2, 1)(3\pi/2, -1)(2\pi, 0)$

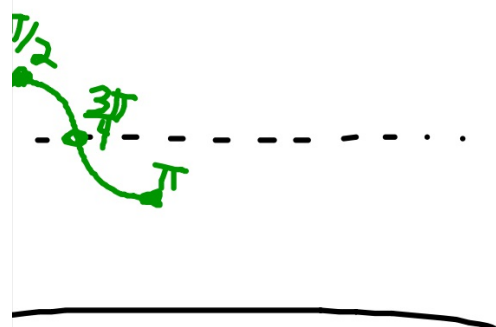


$$r = -\cos 2\theta + 3$$

Chgs: U3, Refl. x-axis

Asm: none

$$(0, 2) (\pi/4, 3) (\pi/2, 4) (3\pi/4, 3) (\pi, 2)$$



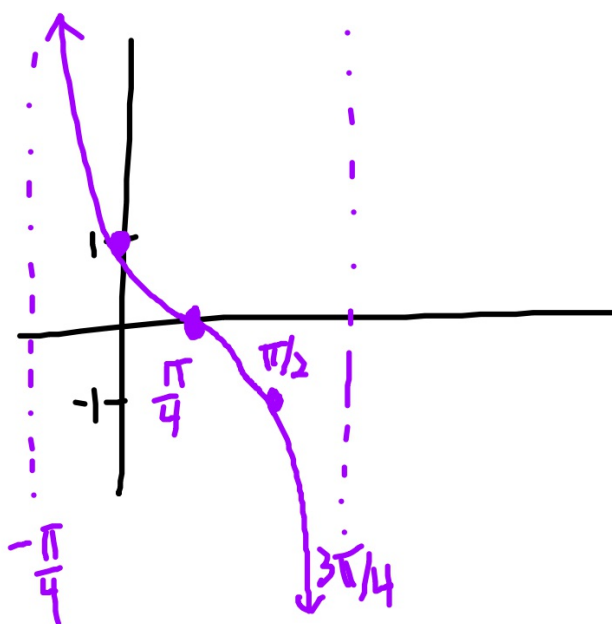
$$4.) y = \cot(\theta + 45^\circ)$$

Amp: none Clgs: $\angle \pi/4$

P: π

Asm: $-\pi/4, 3\pi/4$

Pts: $(0, 1) (\pi/4, 0) (\pi/2, -1)$



$$y = \sin(\theta - 90^\circ) - 1$$

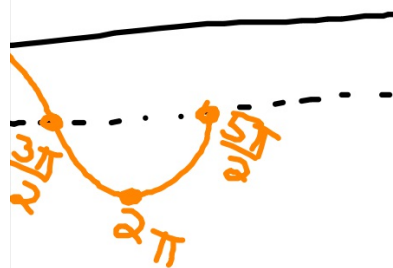
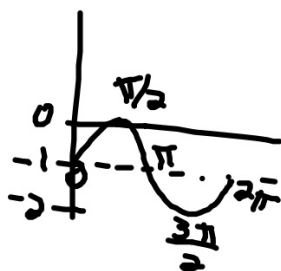
1 Chgs: D1, R $\pi/2$

π Asm: none

$\frac{\pi}{2}, -1) (\pi, 0)$

$\pi, -1) (2\pi, -2)$

$\frac{5\pi}{2}, -1)$



$$6.) y = -\cot 2\theta + 4$$

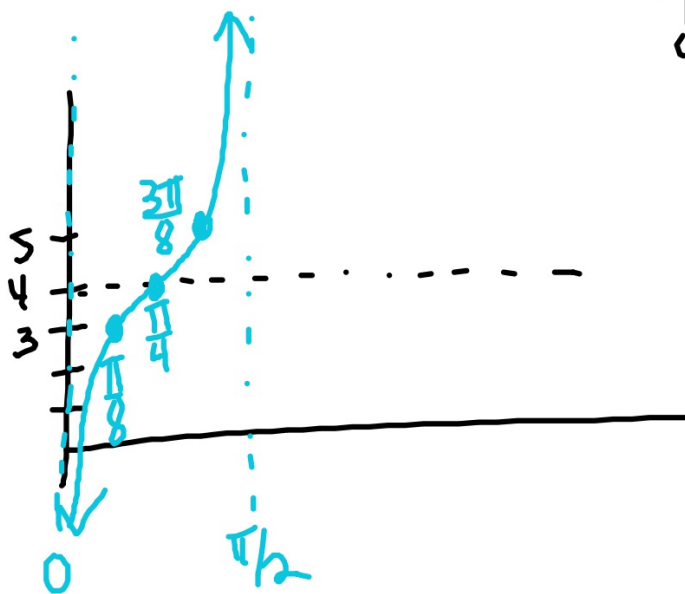
Amp: none

Chgs: U4, Refl

ps: $\pi/2$

Asm: 0, $\pi/2$

As: $(\pi/8, 3) (\pi/4, 4) (3\pi/8, 5)$

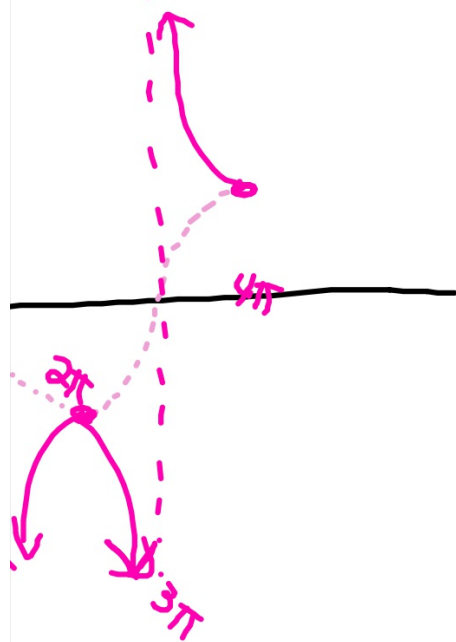


$$y = 2 \sec \frac{1}{2} \theta$$

Chgs: none

Asm: $\pi, 3\pi$

Pts: $(0, 2), (2\pi, -2), (4\pi, 2)$



$$8.) y = \frac{1}{2} \csc \left(\theta - \frac{\pi}{2} \right)$$

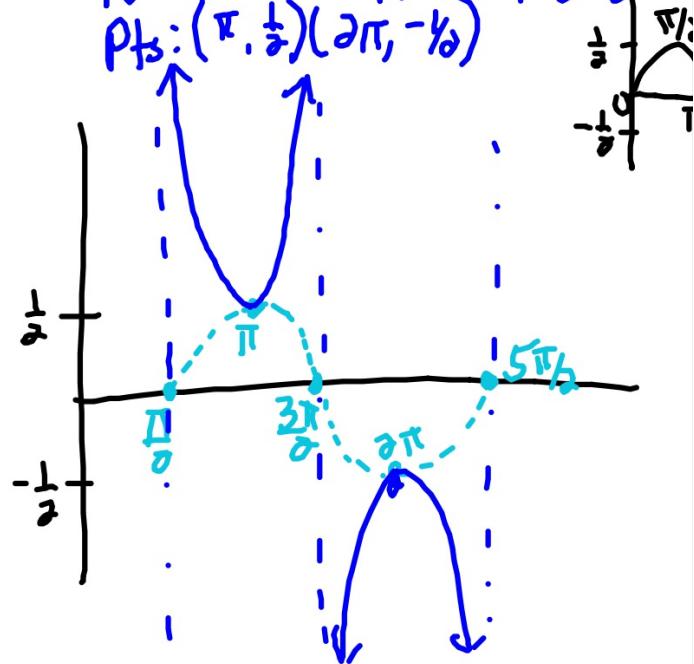
Amp: $\frac{1}{2}$

Chgs: R $\pi/2$

P0: 2π

Asm: $\pi/2, 3\pi/2, 5\pi/2$

Pts: $(\pi, \frac{1}{2}), (2\pi, -\frac{1}{2})$

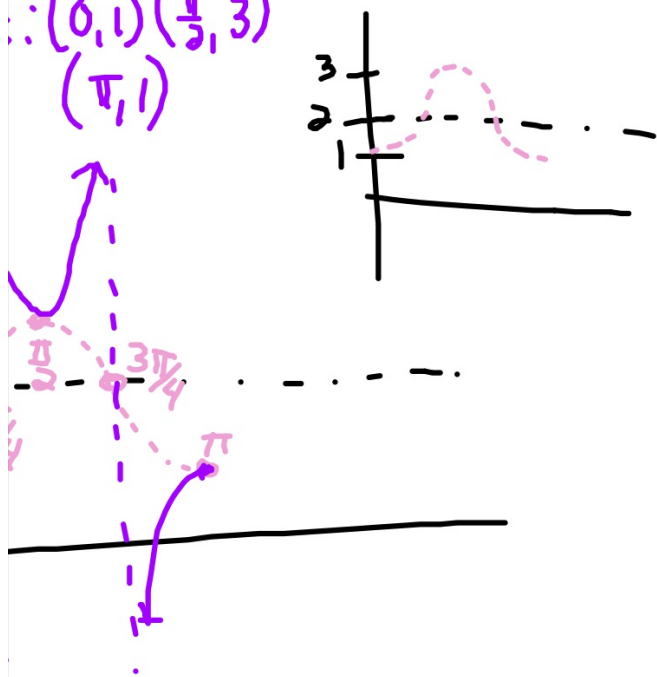


9.) $y = -\sec 2\theta + 2$

Amplitude: 1 Chgs: $0, 2$, Refl. x-axis

Period: π Asym: $\frac{\pi}{4}, \frac{3\pi}{4}$

Points: $(0, 1), (\frac{\pi}{2}, 3), (\pi, 1)$



10.) $y = 3\csc \theta - 1$

Amplitude: 3 Chgs: D

Period: 2π Asym: $0, \pi, 2\pi$

Points: $(\frac{\pi}{2}, 2), (\frac{3\pi}{2}, -4)$

