

Answers.

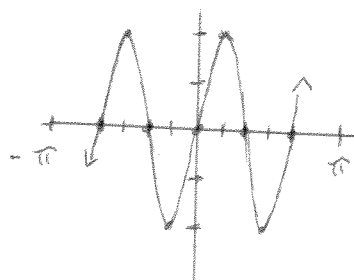
1) $y = 2 \sin 3x$

$\rho = \frac{2\pi}{3}$

Amp: 2

Asym: none

Zeros: $\left\{ \dots, -\frac{2\pi}{3}, -\frac{\pi}{3}, 0, \frac{\pi}{3}, \dots \right\}$



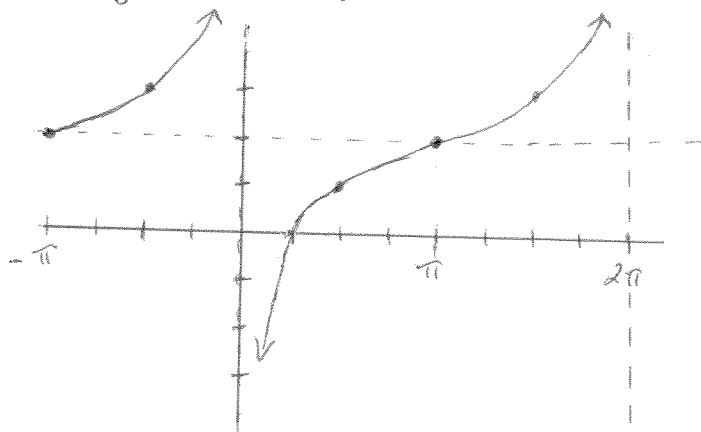
2) $y = 2 - \cot \frac{1}{2}x$

$\rho = \frac{\pi}{2} = 2\pi$

Amp: none Asym: $x=0$

$x=2\pi$

Zeros: $\left\{ \dots, -927 \right\}$

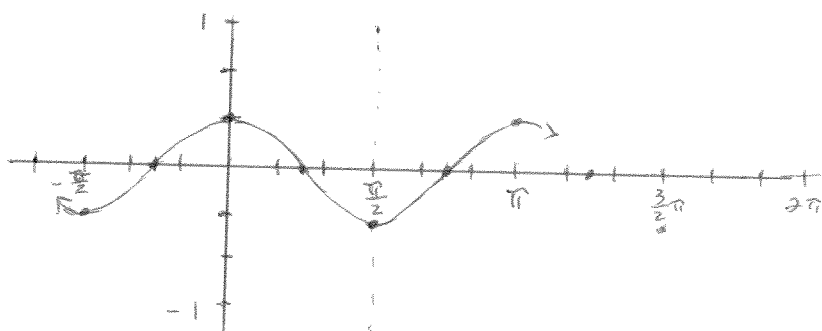


3) $y = -\frac{1}{3} \cos(2x - \pi)$

$\rho = \frac{2\pi}{2} = \pi$ Amp: $\frac{1}{3}$ Asym: none

Zeros: $\left\{ \dots, -\frac{\pi}{4}, \frac{\pi}{4}, \frac{3\pi}{4}, \dots \right\}$

Factor $y = -\frac{1}{3} \cos 2\left(x - \frac{\pi}{2}\right)$



4) $y = \tan 2\left(x + \frac{\pi}{4}\right)$

$\rho = \frac{\pi}{2}$

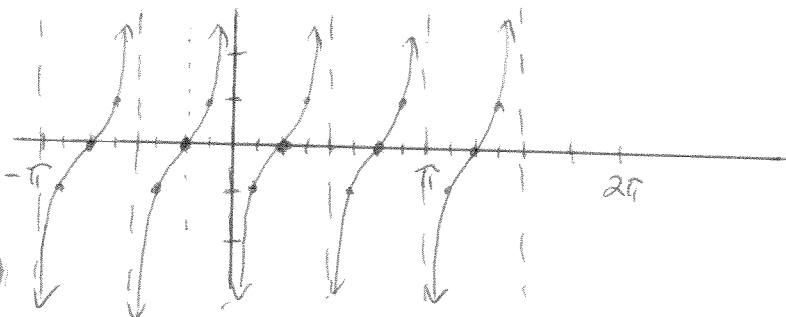
Amp: none Asym: $x = -\frac{\pi}{2}$

$x = 0$

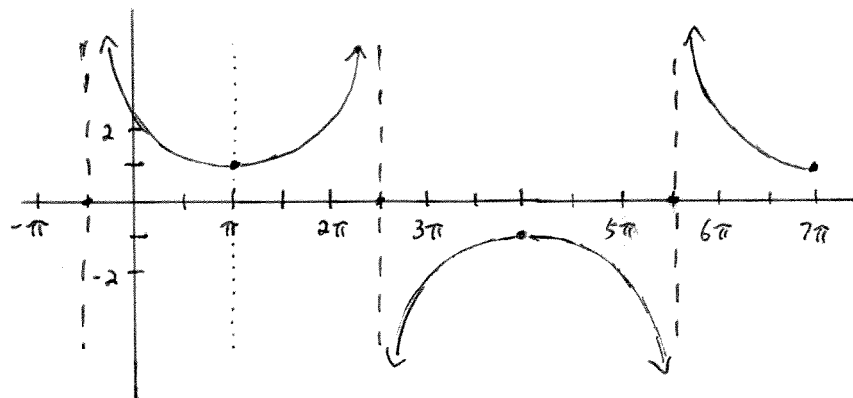
Zeros: $\left\{ \dots, -\frac{3\pi}{4}, \right.$

$x = \frac{\pi}{2}$

$\left. -\frac{\pi}{4}, \frac{\pi}{4}, \dots \right\}$ $x = \pi$



5) $y = \sec \frac{1}{3}(x - \pi)$ use critical points for $y = \cos \frac{1}{3}(x - \pi)$



$$p = \frac{2\pi}{\frac{1}{3}} = 6\pi$$

Amp: none

$$\text{Asym: } x = -\frac{\pi}{2}$$

$$x = \frac{5}{2}\pi$$

$$x = \frac{11}{2}\pi$$

Zeros: none