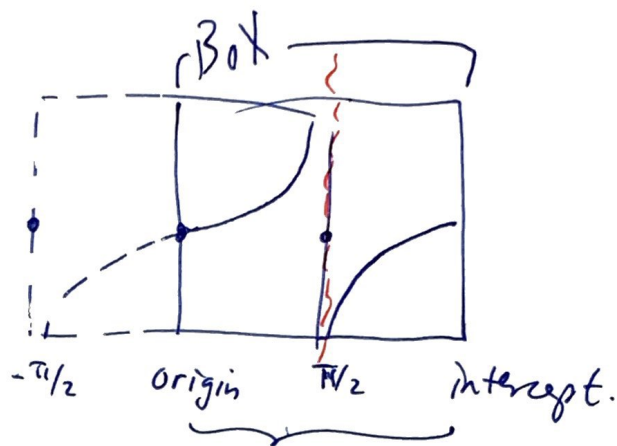
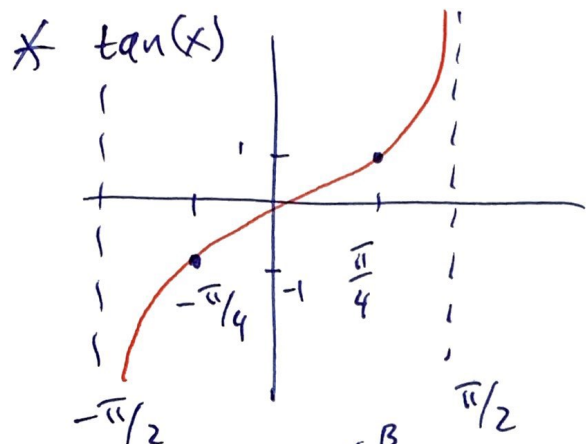


①



[EX] $y = \tan(2t)$

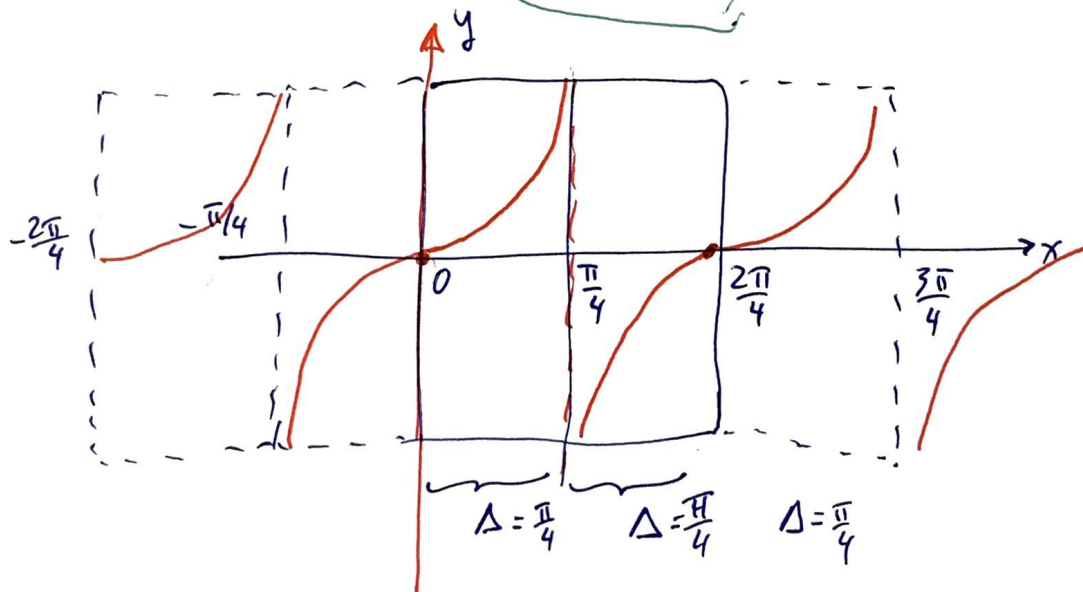
(i) $P = \frac{\pi}{B} = \frac{\pi}{2}$

(ii) $P/2 = \pi/4$ } $LCD = \frac{\pi}{2}$

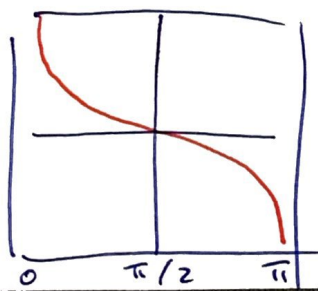
(iii) start = 0

(iv) $\Delta = \pi/4$

(v) 3 Key points: $0, \frac{\pi}{4}, \frac{2\pi}{4}$



* $\cot(x)$



[EX] $y = \cot(\frac{1}{2}t)$

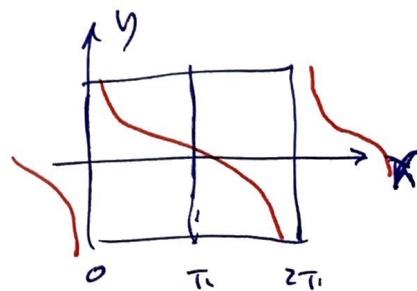
• $P = \pi/1/2 = 2\pi$

• $P/2 = \pi$

• start @ 0

• $LCD \Delta = \pi$

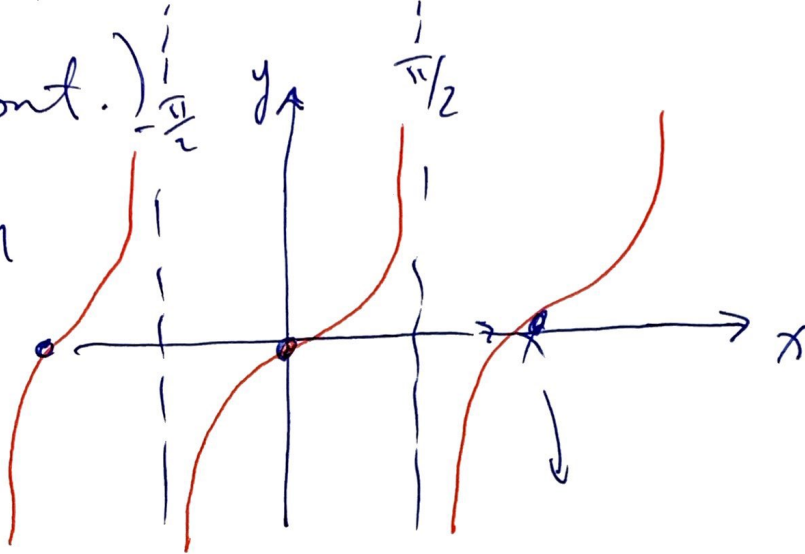
• 0, pi, 2pi



②

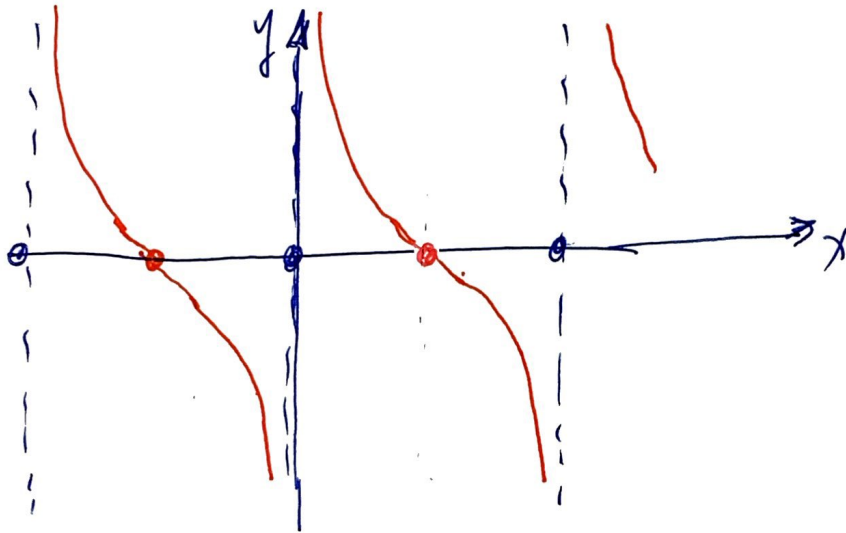
G. 2 (cont.)

$\tan$
 $= \frac{\sin}{\cos}$



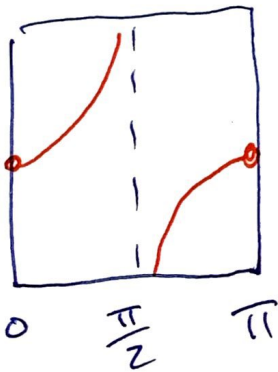
$P = \pi$

$\cot$
 $= \frac{1}{\tan}$

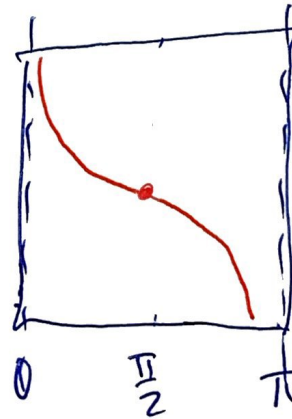


"Box"

$\tan \Rightarrow$



$\cot \Rightarrow$



EX Sketch $y = \overset{A=1}{\tan}(\overset{B}{2}t) + \overset{C}{0}$

(3)

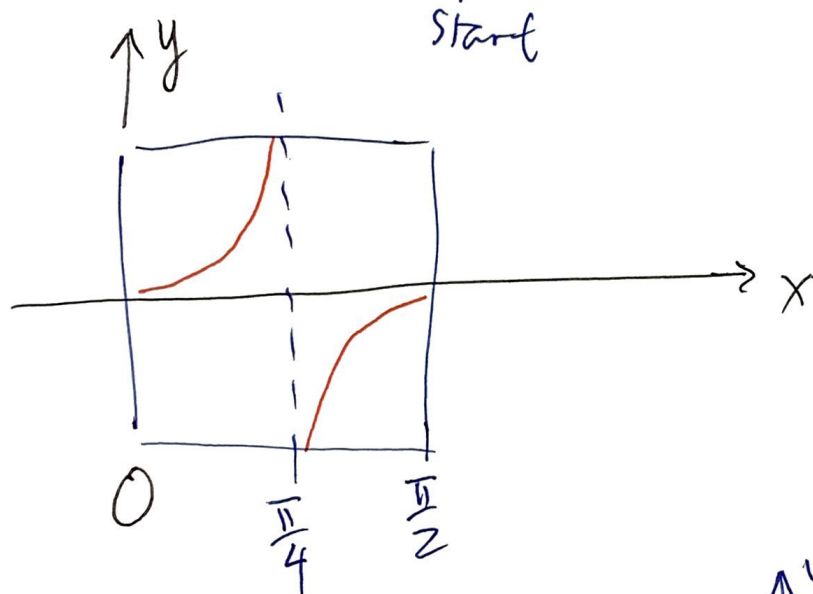
(i) $P = \pi/B = \pi/2$

(ii) $\div 2$ pieces to the box $\Delta = \frac{\pi/2}{2} = \pi/4$

(iii) start = 0

(iv) LCM between 0 & $\pi/4$ is $\pi/4$

(v) 3-key points: $0, 0 + \frac{\pi}{4}, 0 + 2 \cdot \frac{\pi}{4} \rightarrow (0, \frac{\pi}{4}, \frac{\pi}{2})$



EX $y = 2 \tan(\frac{1}{5}t) + 1$

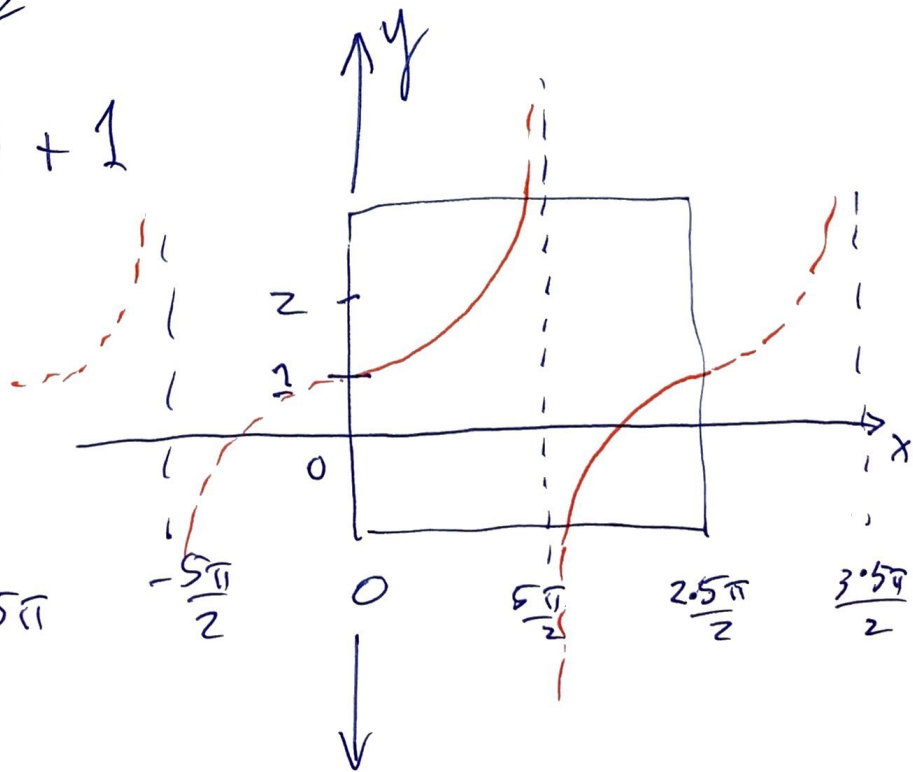
(i) $P = \pi/1/5 = 5\pi$

(ii) $P/2 = \frac{5\pi}{2}$

(iii) start = 0

(iv) LCM = $\frac{5\pi}{2}$

(v) Key Pts: $0, \frac{5\pi}{2}, 5\pi$



EX Sketch $y = \cot\left(\frac{1}{2}t\right)$

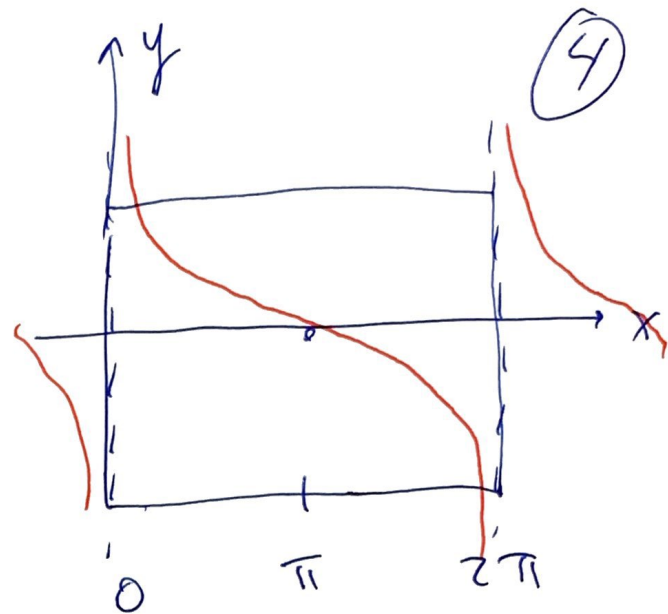
(i) $P_0 = \pi$, $P = \pi/B = \pi/1/2 = \boxed{2\pi}$

(ii) $\Delta = P/2 = \frac{2\pi}{2} = \pi$ } LCM = π

(iii) start @ 0

(iv) LCM = π

(v) 3-key points: $(0, \pi, 2\pi)$



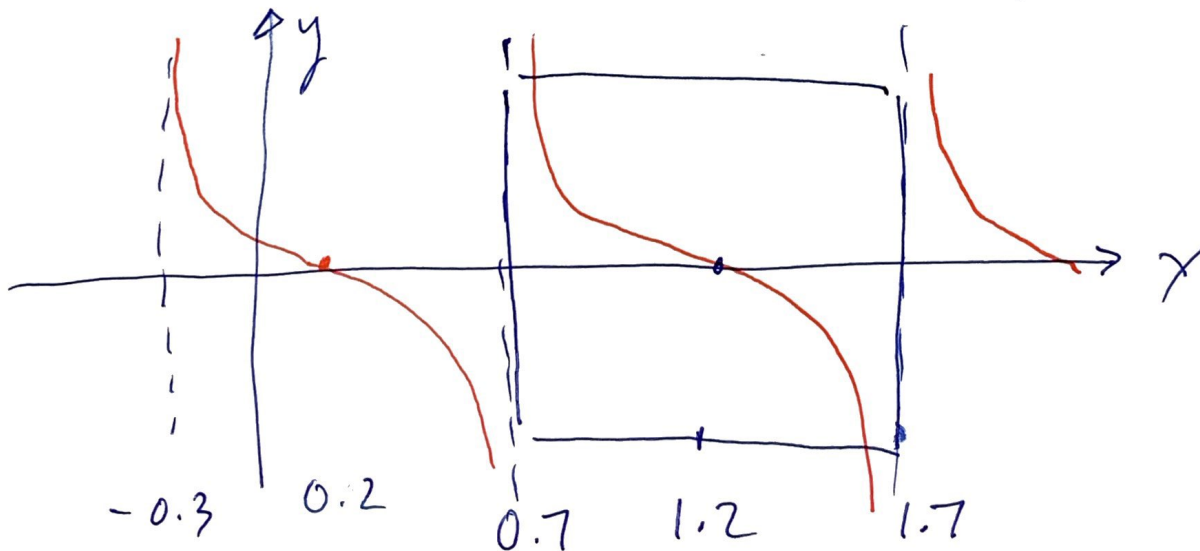
EX Sketch $y = 8 \cot(3t-2) = \underline{\underline{8 \cot\left[3\left(t-\frac{2}{3}\right)\right]}}$

(i) $P = \pi/3$

(ii) $\Delta = P/2 = \pi/6$ } LCM: no LCM, use the box & shift

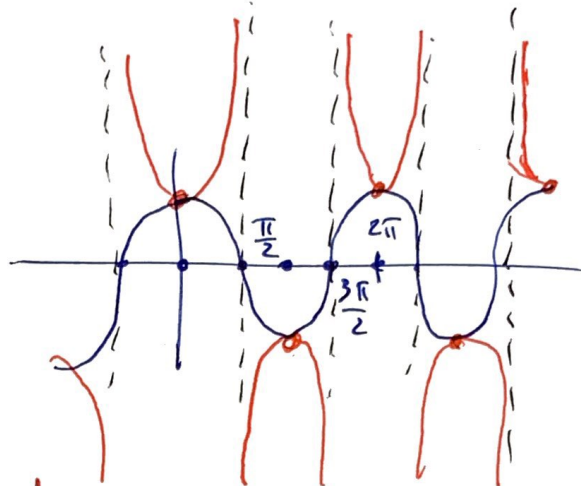
(iii) start = $2/3$

(v) 3-key points: $\left(\frac{2}{3}, \frac{2}{3} + \frac{\pi}{6}, \frac{2}{3} + 2 \cdot \frac{\pi}{6}\right) = \left(\frac{2}{3} \approx 0.7, \approx 1.2, 1.7\right)$



* sec

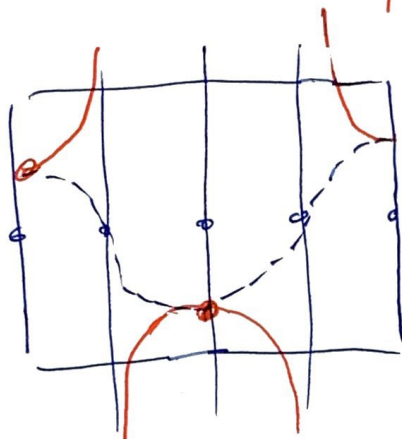
$$\boxed{\sec(x)} = \frac{1}{\cos(x)}$$



(5)

$$P = 2\pi$$

Box



[EX] Sketch $y = 2\sec\left(3t + \frac{\pi}{4}\right) = 2\sec\left(3\left[t + \frac{\pi}{12}\right]\right)$

(i) $P = \frac{2\pi}{3}$

(ii) $P/4 = \frac{2\pi/3}{4} = \frac{2\pi}{12} = \frac{\pi}{6} = \frac{2\pi}{12}$

(iii) start = $-\frac{\pi}{12} = -\frac{\pi}{12}$

(iv) LCM: $2\pi/12$

(v) 5-key point: $\left(-\frac{\pi}{12}, -\frac{\pi}{12}, \frac{\pi}{6}, -\frac{\pi}{12} + \frac{2\pi}{6}, -\frac{\pi}{12} + \frac{3\pi}{6}, \frac{-\pi}{12} + \frac{4\pi}{6}\right)$

$\left(-\frac{\pi}{12}, \frac{\pi}{12}, \frac{3\pi}{12}, \frac{5\pi}{12}, \frac{7\pi}{12}\right)$

