105.

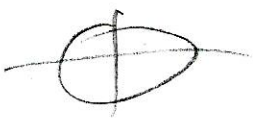
a) $\sin x - \sin x \operatorname{tg} x = 0$, $x \in [0, \pi]$

$\therefore$

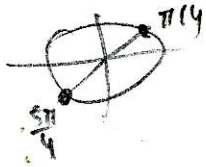
$\sin x (1 - \operatorname{tg} x) = 0$

$\therefore$ $\begin{cases} \sin x = 0 \\ \text{ou} \\ \operatorname{tg} x = 1 \end{cases}$

$\sin x = 0 \Rightarrow \underline{x = 0, \pi} \in [0, \pi]$



$\operatorname{tg} x = 1 \Rightarrow \underline{x = \frac{\pi}{4}} \in [0, \pi]$



$\therefore$ $\boxed{x = 0, \pi, \frac{\pi}{4}}$

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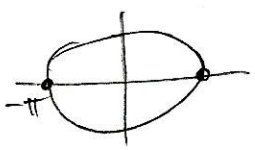
b) $\sin x \operatorname{tg} 3x = 0$, $x \in [-\pi, 0]$

$\therefore$ $\sin x = 0$ ou $\operatorname{tg} 3x = 0$

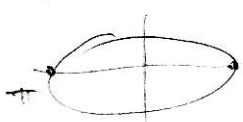
$\sin x = 0 \Rightarrow \underline{x = -\pi, 0}$



$\operatorname{tg} 3x = 0 \Rightarrow 3x = 0 \Rightarrow \underline{x = 0}$

$3x = -\pi \Rightarrow \underline{x = -\frac{\pi}{3}}$

$3x = -2\pi \Rightarrow \underline{x = -\frac{2\pi}{3}}$



$\therefore$

$\boxed{x = 0, -\frac{\pi}{3}, -\frac{2\pi}{3}, -\pi}$

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c) $\begin{cases} 6\sin^2 x - 5\cos x - 2 = 0 \\ x \in [0, 2\pi] \end{cases}$

$\sin^2 x = 1 - \cos^2 x$

$\therefore$

$\underline{6\sin^2 x} - 5\cos x - 2 = 0$

$6 - 6\cos^2 x - 5\cos x - 2 = 0$

$-6\cos^2 x - 5\cos x + 4 = 0$

$\cos^2 x + \frac{5}{6}\cos x - \frac{2}{3} = 0$

$\cos x = \left. -\frac{5}{6} \pm \sqrt{\frac{25}{36} + \frac{8}{3}} \right/ 2$

$= \left. -\frac{5}{6} \pm \sqrt{\frac{25 + 96}{36}} \right/ 2$

$= \left. -\frac{5}{6} \pm \sqrt{\frac{121}{36}} \right/ 2$

$= \frac{-\frac{5}{6} \pm \frac{11}{6}}{2} = \begin{matrix} \nearrow \frac{1}{2} \\ \searrow \frac{-16}{12} = -\frac{4}{3} \end{matrix}$

$\cos x = \frac{1}{2} \Rightarrow \boxed{x = \frac{\pi}{3} \text{ ou } x = \frac{5\pi}{3}}$