Question

The functions f and g are defined in the largest possible domain by the equations

$$f(x) = \arcsin(\cos x)$$
 and $g(x) = \sqrt{\pi^2 - 4x^2}$.

- **a**) Sketch the graphs of f and g on the same set of axes.
- **b**) Use an algebraic method to solve the equation

$$\arcsin(\cos x) = \sqrt{\pi^2 - 4x^2}$$
.

$\alpha) \qquad \qquad$	b) $\operatorname{arcsm}(\operatorname{cost}) = \sqrt{\frac{1}{2} \frac{1}{4\lambda^2}}^{1}$ $\operatorname{cost}_{\lambda} = -\operatorname{Sin}(\sqrt{\frac{1}{12} \frac{1}{4\lambda^2}})^{1}$
$\begin{array}{l} \underbrace{ \begin{array}{l} \underbrace{ $	$\begin{split} & \leq \ln(\frac{\pi}{2} - \lambda) = - s_M \sqrt{\pi^2 + q_1^2} \\ & \implies - \frac{\pi}{2} - \lambda = \sqrt{\pi^2 - q_2^2} \\ & \implies - \frac{\pi}{2} - \pi \chi + \chi^2 = \pi^2 - 4\chi^2 \end{split}$
• Here $\hat{i} \in [\underline{c}^{-1}u_{-1}]$ set that $\hat{i} \in [\underline{c}^{-1}u_{-1}]$ for the \hat	$ \begin{array}{l} \underset{i=0}{\longrightarrow} \sum_{k=1}^{2} -\pi i \lambda_{k} - \frac{3\pi^{2}}{4} = 0 \\ \underset{i=0}{\Longrightarrow} \sum_{k=1}^{2} -\pi i \lambda_{k} - \frac{3\pi^{2}}{4} = 0 \\ \underset{i=0}{\Longrightarrow} (10x + 3\pi) = 0 \\ \underset{i=0}{\longrightarrow} (2x - \pi) (10x + 3\pi) = 0$
$\frac{E}{\left(\frac{1}{2} - \frac{1}{\sqrt{2}}\right)} = \frac{1}{\left(\frac{1}{2} - \frac{1}{\sqrt{2}}\right)}$	$\begin{array}{c} \chi_{\rm R} < \sqrt{\eta_{\rm R}'}\\ -\frac{M_{\rm R}'}{10}\\ \hline \\ \frac{M_{\rm R}'}{10} \\ \frac{M_{\rm R}'}{10$
	$\begin{split} & \int \Omega_{c} (\nabla u \left(+ \overline{T}_{c} \right)) = Q \text{cense} D = 0 \\ & \int \Omega_{c}^{2} - \frac{1}{4} \left(e \overline{T}_{c} \right)^{2} = \sqrt{\pi_{c}^{2} + e^{\frac{\pi}{2}}_{c}} = 0 \qquad \qquad$
	$\begin{split} \sqrt{\eta^{2} - \frac{1}{2} \left(\frac{2\eta}{\eta^{2}}\right)^{2}} &= \frac{\eta \pi 2\eta}{\eta^{2} - \frac{1}{\eta^{2}} \frac$
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 $x = \pm \frac{\pi}{2}$