

**Solution.**

$$\begin{aligned}\sin(x) - \cos(x) &= -0.3, \\ \sin(x) - \cos(x) &= -\sqrt{2} \left( \frac{\cos(x)}{\sqrt{2}} - \frac{\sin(x)}{\sqrt{2}} \right) = -\sqrt{2} \left( \cos\left(\frac{\pi}{4}\right) \cos(x) - \sin\left(\frac{\pi}{4}\right) \sin(x) \right) = -\sqrt{2} \cos\left(\frac{\pi}{4} + x\right), \\ \text{so } -\sqrt{2} \cos\left(\frac{\pi}{4} + x\right) &= -\frac{3}{10}.\end{aligned}$$

Divide both sides by  $-\sqrt{2}$ :

$$\cos\left(\frac{\pi}{4} + x\right) = \frac{3}{10\sqrt{2}},$$

For  $\cos(x) = a, x = \pm \arccos(a) + 2\pi n, n \in \mathbb{Z}$ , then

$$\frac{\pi}{4} + x = \pm \arccos\left(\frac{3}{10\sqrt{2}}\right) + 2\pi n, n \in \mathbb{Z}.$$

Subtract  $\frac{\pi}{4}$  from both sides:

$$x = \pm \arccos\left(\frac{3}{10\sqrt{2}}\right) - \frac{\pi}{4} + 2\pi n, n \in \mathbb{Z}.$$

**Answer.**

$$x = \pm \arccos\left(\frac{3}{10\sqrt{2}}\right) - \frac{\pi}{4} + 2\pi n, n \in \mathbb{Z}.$$