

2.3
1

$$2\sin^2 x - 11\sin x \cos x + 12\cos^2 x = 0 \quad /: \cos^2 x \neq 0$$

$$2\tan^2 x - 11\tan x + 12 = 0$$

$$\tan x = 4 \rightarrow x = \arctan(4) + \pi k \quad k \in \mathbb{Z}$$

$$\tan x = \frac{3}{2} \rightarrow x = \arctan\left(\frac{3}{2}\right) + \pi k$$