

$$(1-3\sin^2 x) / \sin^2 x = 5\operatorname{ctg} x$$

$$1/\sin^2 x - 3 = 5\operatorname{ctg} x$$

$$1 + \operatorname{ctg}^2 x = 1/\sin^2 x$$

$$1 + \operatorname{ctg}^2 x - 3 = 5\operatorname{ctg} x$$

$$\operatorname{ctg} x = t$$

$$1 + t^2 - 3 = 5t$$

$$t^2 - 5t - 2 = 0$$

$$D = 25 + 8 = 33$$

$$t_{1,2} = (5 \pm \sqrt{33}) / 2$$

$$\operatorname{ctg} x = (5 \pm \sqrt{33}) / 2$$

$$x = \operatorname{arcctg}((5 \pm \sqrt{33}) / 2) + Pk$$

