

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

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

$$1 + \operatorname{ctg}^2 x - 3 - 5\operatorname{ctg} x = 0$$

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

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

$$D = 25 + 8 = 33$$

$$t_1 = 5 + \sqrt{33}/2$$

$$t_2 = 5 - \sqrt{33}/2$$

$$\operatorname{ctg} x = 5 + \sqrt{33}/2$$

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

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

