

$r_1 := 2$ $r_2 := 1.5$ $z := 0.5$ $x := 5$

Guess

$\alpha := 50\text{deg}$

Given

$$x = 2 \cdot (r_1 + r_2) \cdot \left(1 - \cos\left(\frac{\alpha}{2}\right) \right) + z \cdot \tan(\alpha)$$

Angle := Find(α)

Angle = 77.509 deg