**Find the equation of the line passing through the point (√3,4) and inclined at an angle of 60° with the positive x-axis.**

y = mx + c

m = tan60 = $\sqrt{3}$

Substitute: y = $\sqrt{3}\sqrt{3}$ + c = 4 🡪 c = 1 🡪 y=x$\sqrt{3}$ + 1

**Given that tan15 = –√3 + 2, find the equation of the line passing through the origin inclined at an angle of 75° with the positive x-axis.**

tan75 = tan(90–15) = $\frac{1}{–\sqrt{3} + 2}$ =$\frac{1}{–\sqrt{3} + 2}$ x $\frac{\sqrt{3}+2}{\sqrt{3}+2}$ = $\sqrt{3}$+2 🡪 y = ($\sqrt{3}$+2)x

tan(90–x) = $\frac{1}{tan⁡(x)}$

**Lines L1 and L2 have equations x + y = 10 and y =** $\frac{4x}{5}$ **– 3 respectively. Find the acute angle between these 2 lines.**

ϴ1

ϴ1 = m1 = 1 🡪 Angle = tan-1(1)

ϴ2 = m2 = $\frac{4}{5}$ 🡪 Angle = tan-1( $\frac{4}{5}$ )

ϴ2

ϴT = tan-1(1) + tan-1( $\frac{4}{5}$ )

|  |  |
| --- | --- |
| Radians | Degrees |
| $$\frac{π}{15}$$ | 12 |
| $$\frac{π}{12}$$ | 15 |