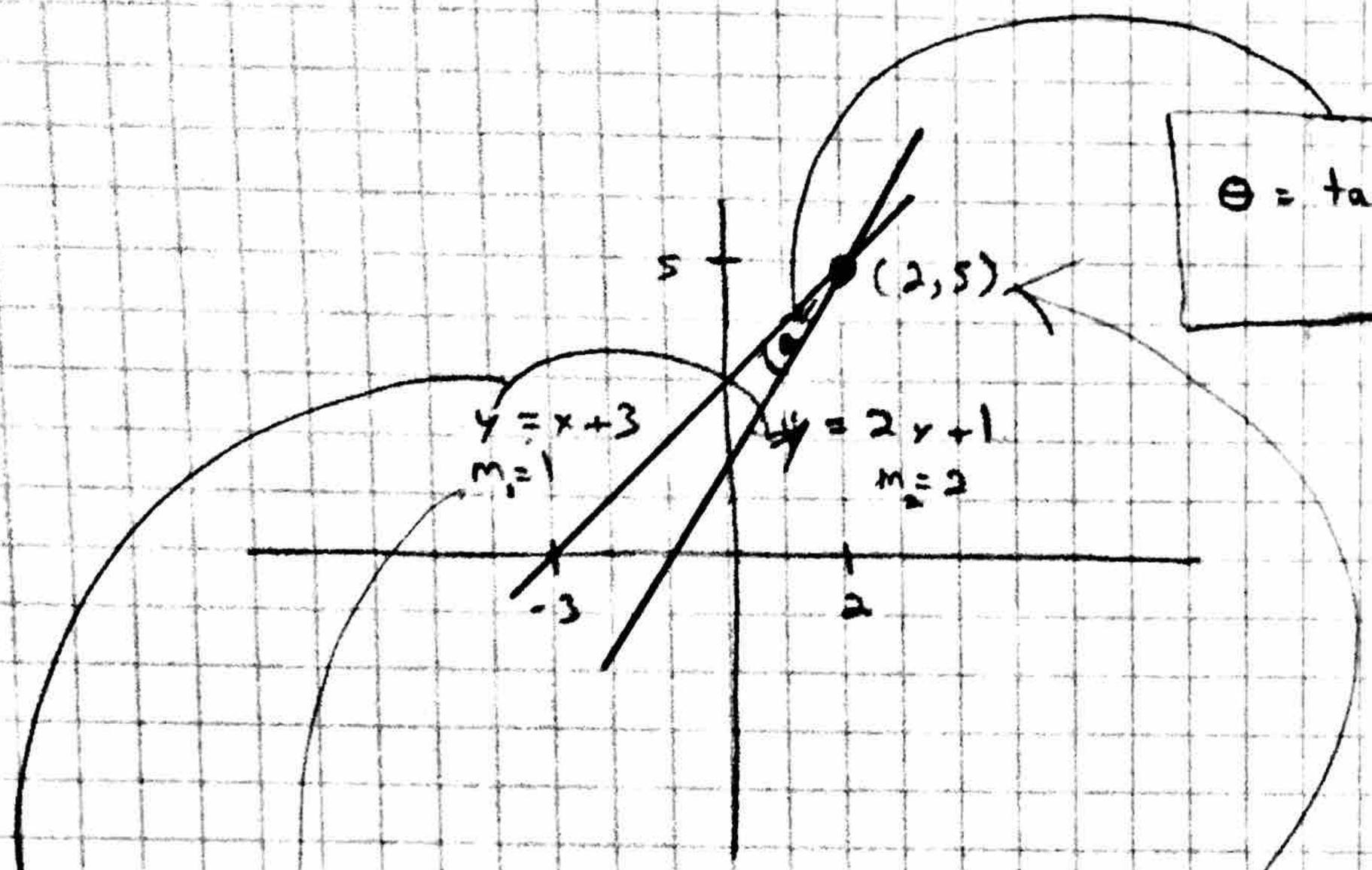
Find the Point of Intersection and the angle between lines $y = x+3$ and $y = 2x+1$

$$\theta = \tan^{-1}\left(\frac{m_2 - m_1}{1 + m_2 m_1}\right)$$




Solve for x

$$x+3 = 2x+1$$
$$-x-1 \quad -x-1$$
$$2 = x$$

Point of Intersect
(2, 5)

Solve for y

$$y = 2(2)+1$$
$$y = 4+1$$
$$y = 5$$

$$\rightarrow \theta = \tan^{-1}\left(\frac{2-1}{1+(2)(1)}\right)$$
$$\frac{1}{1+2}$$
$$\theta = \tan^{-1}\left(\frac{1}{3}\right) = 18.34349°$$
$$18.43°$$