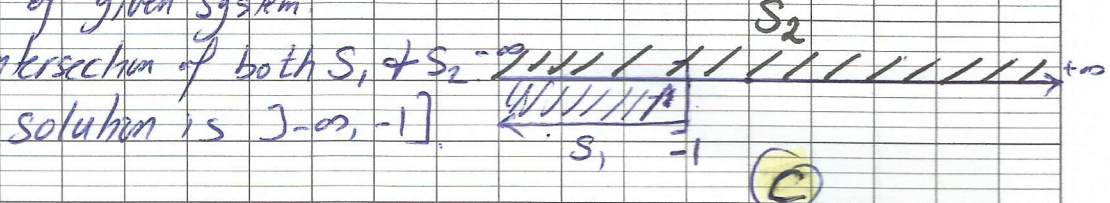
Solution of given system

is the intersection of both S_1 & S_2

Thus, solution is $]-\infty, -1]$



(C)

2) (d): $\sqrt{3}y = -x + \sqrt{3}$

$$y = -\frac{x}{\sqrt{3}} + \frac{\sqrt{3}}{\sqrt{3}}$$

$$y = -\frac{\sqrt{3}}{3}x + 1$$

(d) is decreasing

So, $\tan\alpha = -$ slope of (d)

$\tan\alpha = \frac{\sqrt{3}}{3}$

$\tan\alpha = \tan^{-1}\left(\frac{\sqrt{3}}{3}\right)$

(B)

Thus, $\alpha = 30°$ where α is the acute angle between x-axis & (d)

3) ΔABC is right at A (given)

and [AH] is a height relative to hyp. [BC] (given)

then using the geometric mean

$AB^2 = BH \times BC$

Then $AB^2 = 15 \times 3$

Thus, $AB = 3\sqrt{5}$ cm (B)

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