

$\cos x = \frac{a^2 - b^2}{a^2 + b^2} \neq 0 \Rightarrow a^2 - b^2 \neq 0 \Rightarrow R = [0, \pi]$

$\sin x = \frac{a^2 + b^2}{a^2 - b^2} \neq 0 \Rightarrow R$

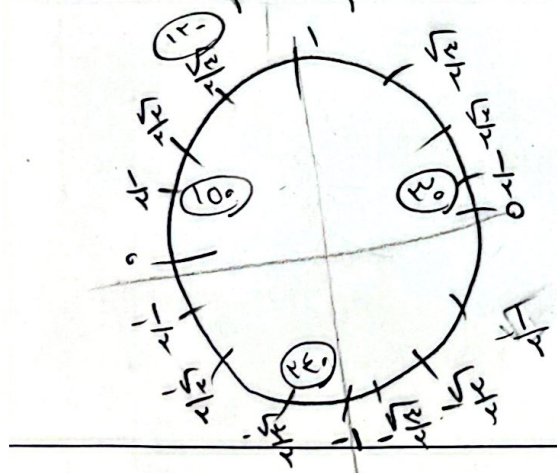
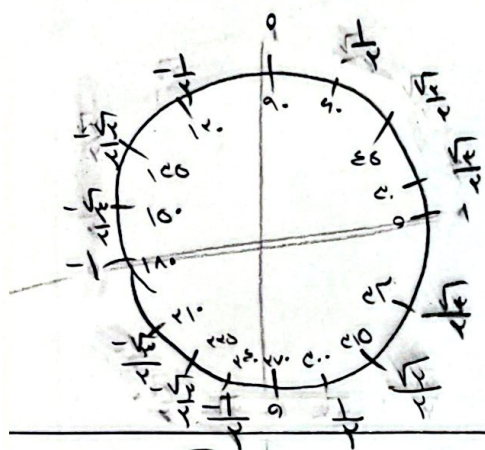
$\Rightarrow a^2 - b^2 \neq 0 \Rightarrow a^2(a^2 - b^2) \Rightarrow (a^2)(a - b)(a + b) \Rightarrow \frac{0}{-1} \frac{-1}{+1} \frac{1}{-1}$
 $[0, \pi] \cup [\pi, 2\pi)$

$\sin x \Rightarrow x - \pi > 0 \Rightarrow -x > -\pi \Rightarrow x < \pi \Rightarrow x - \pi > 0 \Rightarrow x > \pi \Rightarrow$
 $x < \pi < x \Rightarrow [\pi, 2\pi)$

$\Rightarrow R$

$\Rightarrow a - b > 0 \Rightarrow a > b \quad a - b > 0 \Rightarrow a > b \Rightarrow [\pi, 2\pi)$

$\Rightarrow |a| + |b| > 0 \Rightarrow R$



$\cos$
 $\sin$

$\frac{r}{r} = 1 \Rightarrow \frac{1}{r} + \frac{1}{r} \Rightarrow \frac{2r}{r} \Rightarrow \frac{2}{1}$

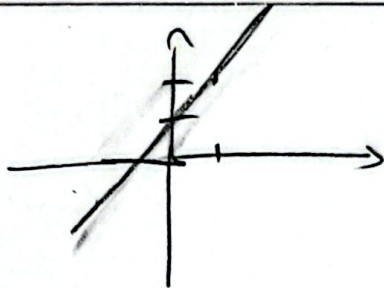
$\frac{r}{r} \Rightarrow \frac{r}{r} \Rightarrow \frac{1}{r} \Rightarrow \frac{r}{r} \Rightarrow \frac{1}{r}$

الف = $x=1 \Rightarrow y^3-1=2 \Rightarrow y^3=3 \checkmark$

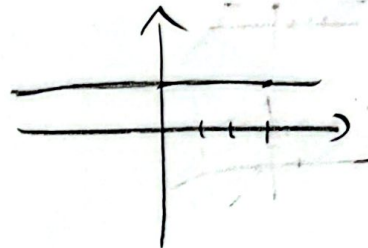
ب = $|y| + x^2 = x + 3 \Rightarrow |y| + x^2 = x + 3 \Rightarrow x=1 \Rightarrow |y| + 1 = 4 \Rightarrow |y| = 3 \Rightarrow y = \pm 3$

ج = $\Rightarrow x=1 \Rightarrow \sqrt{x} + |y-2| = 0 \Rightarrow |y-2| = -1 \propto$

$\Rightarrow x = \cos y \Rightarrow y = 1.0 \Rightarrow x = \cos 1.0 \Rightarrow$ جواب داده



(ب)



الف =

$a+2a=1+0 \Rightarrow 3a=1 \Rightarrow a=1/3$

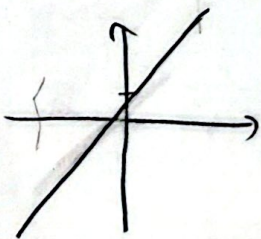
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$aA = \frac{-b}{2a} = \frac{-1}{2} = -1/2$

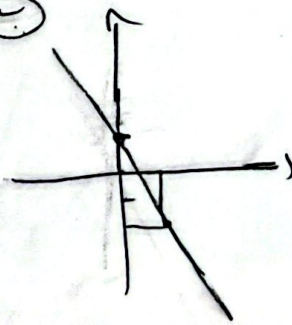
$y A = -\frac{b^2 - 4ac}{4a} = \frac{1 - 4(-1)(1)}{4} = \frac{5}{4} \Rightarrow$

$5 = 1 - 4b = 4a = 4 \Rightarrow b = 3 \Rightarrow -5 + 4 = -1$

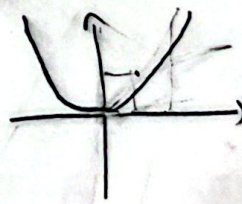
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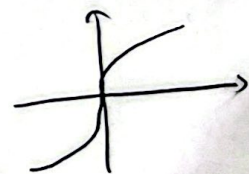
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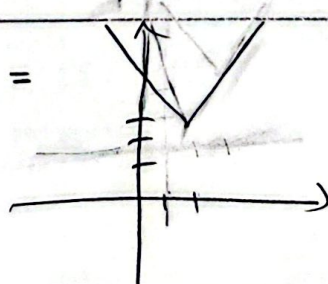


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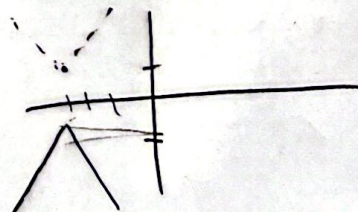


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