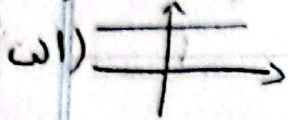


الف $y_1'' - x = 2x^2$ $y_1''' - x = 2x^2 \rightarrow y_1'' = y_2'$ ✓

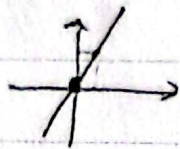
ب $|y| + x^2 - x - 1 = 0$ $x=0$ $|y|=1$ $y = \pm 1$ ✗

ج $\sqrt{x-1} + |y-2| = 0$ ✓ مع 2 عدد مثبت هون متساوي

د $x = \cos y$ $x=0$ $y = 90.127^\circ$

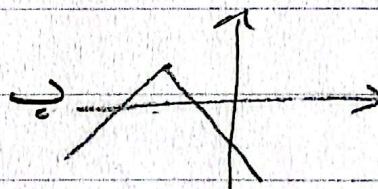
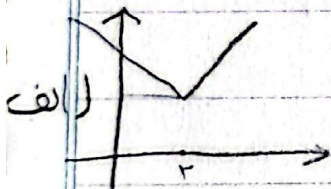
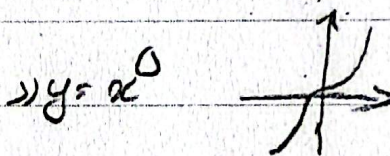
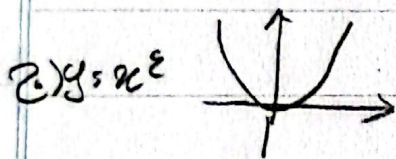
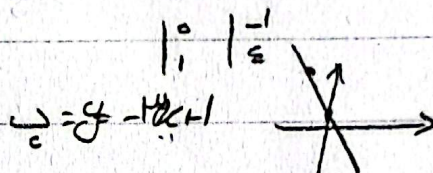
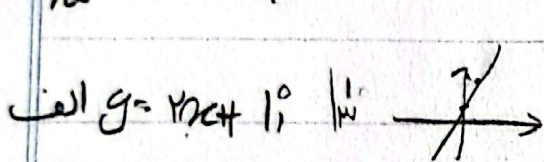


ب) $y = 2 \sin x$ $|0| \quad |1|$



$y = ax + b \rightarrow b=0, a=1$ $a+2b=1$ ①

$\frac{-b}{a} \rightarrow \frac{-a}{1} = 2 \rightarrow a = -2, \frac{a+2b}{1} = 1 \rightarrow b = 1 \rightarrow b=0$ ④



الف) $\frac{x+2}{x^2-5x} \rightarrow \frac{x+2}{x(x-5)}$

$R - \{0, 5\}$

ب) $\frac{x+2}{x^2-7x+14}$ R

4 نقطة بين مخرج بسط وقت صفر تعينه

ج) $\frac{x+2}{x^2+x+2}$ R

4 نقطة ~ ~ ~ ~

د) $\frac{x+2}{x^2-5x} \rightarrow \frac{x+2}{x^2(x-5)(x+2)}$

$R - \{0, \pm 2\}$

$$y_1(x) = \sqrt{x-1}$$

$$x > 1 \cup x \geq 1 = [1, \infty)$$

$$y_2 = \frac{y_1'(x)}{y_1(x)}$$

$$y_3 = \frac{y_2'(x)}{y_2(x)}$$

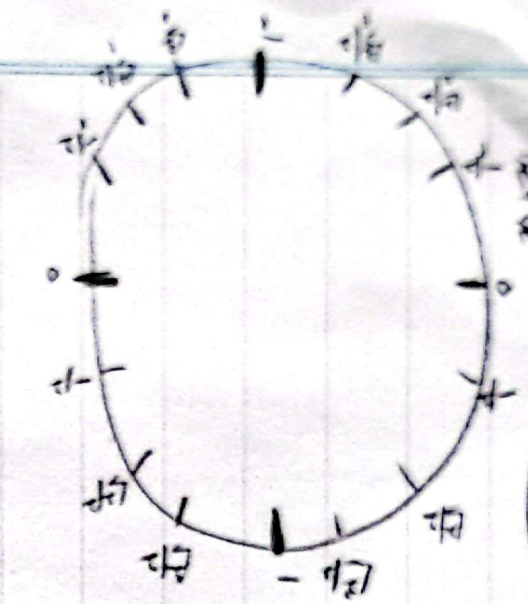
$$y_4 = \frac{y_3'(x)}{y_3(x)}$$

(R)

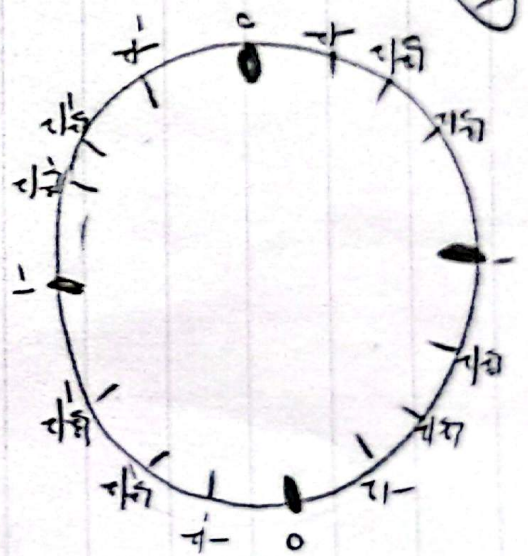
$x \geq 1$

$R = \{0\}$

$(1, \infty) \cup (1, \infty)$



(-1)



(b)

$$-\cos\left(\frac{\sqrt{x}}{p}\right) = -\cos\left(\sqrt{x} - \frac{\sqrt{x}}{p}\right) = 1 - \cos\sqrt{x} = \frac{1}{p} \rightarrow \sin\frac{\sqrt{x}}{p}$$

$$-\cos\frac{\sqrt{x}}{p} = -\cos\left(\sqrt{x} - \frac{\sqrt{x}}{p}\right) = -\cos\sqrt{x} = -\sin\left(\frac{\sqrt{x}}{p}\right) = \sin\left(-\frac{\sqrt{x}}{p}\right)$$



$$\left[\frac{y_k \pi - \frac{\pi}{p}}{p}, \frac{y_k \pi - \frac{\pi}{p}}{p} \right]$$