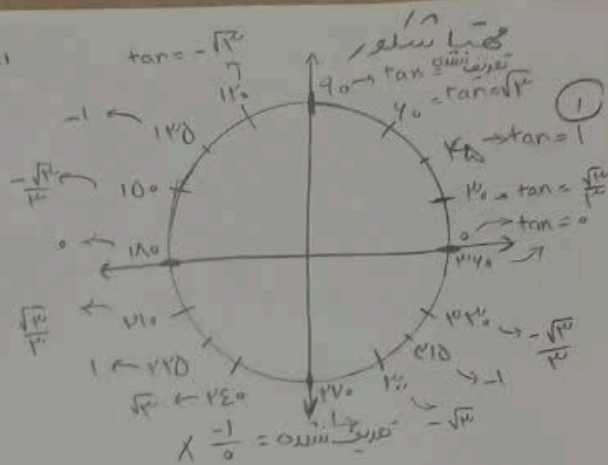


بارك الله (خبر)

نصف دائرة



الف) $\frac{1}{r} + (-1) + r - 1 = \frac{1}{r} - r = \frac{1-r^2}{r}$

ب) $\frac{\sqrt{r}}{r} + \frac{\sqrt{r}}{r} - \frac{\sqrt{r}}{r} - \frac{\sqrt{r}}{r} = \frac{0}{r}$

ج) $-\frac{\sqrt{r}}{r} + r - \frac{\sqrt{r}}{r} - r = \frac{r - \sqrt{r} - r - \sqrt{r}}{r} = \frac{-2\sqrt{r}}{r}$

د) $\cos(0) + \sin(\frac{\pi}{2}) = 1 + 1 = 2$

$m=a \Rightarrow a^2+ra = ra+a+r$
 $a^2+ra = ra+r \Rightarrow a^2+a-r=0$
 $(a+r)(a-1)=0$

$f(1) \Rightarrow 1+r = a \Rightarrow a = 1+r$

$f(m) = \begin{cases} rm^2-b & m+1 \geq r \\ a+rm & -r \leq m \leq -1 \end{cases}$

الف) $x^m - r^m \neq 0 \Rightarrow m^2(m-r) \neq 0 \Rightarrow m \neq 0, r$

ب) $\frac{1}{rm^2 + rm + r} \Rightarrow \frac{1}{r(m^2 + m + 1)}$

$am - a = 0 \Rightarrow m = 1 \Rightarrow a = 1r$
 $b - rm = 0 \Rightarrow b = 4$

الف) $y = \sqrt{m^2-1} + \sqrt{m+r}$
 $m^2-1 \geq 0 \Rightarrow m \geq 1$
 $m-r \geq 0 \Rightarrow m \geq r$

الف) $\frac{(m-r)(m+r)}{(m^2-r^2)(m^2+r^2)} \geq 0$

ب) $\frac{-m^2 - rm^2 - am + 4}{-m^2 + am^2} \geq 0$

$\frac{m^2 + 12m^2 - am - 4}{-m^2 - am^2} \geq 0$

الف) $r[n] - r \geq 0 \rightarrow [n] \geq r \rightsquigarrow D_f = [r, +\infty)$

(9)

ب) $r[n] - r \geq 0 \rightsquigarrow [n] \geq r \wedge \rightarrow [n] \geq r \Rightarrow [r, +\infty) = D_f$

الف) $\frac{r[n] + 1}{|n - r|} \geq 0 \rightsquigarrow \frac{-1}{-1 +} \rightsquigarrow [-1, +\infty) - \{r\} \left\{ \begin{array}{l} \xrightarrow{\cap} [-1, r] - \{r\} = D_f \quad (10) \\ \xrightarrow{\cap} (-\infty, r] \end{array} \right.$

$\frac{r - n}{n^2 + n + r} \geq 0 \rightsquigarrow \frac{r}{+ \quad -} \rightsquigarrow (-\infty, r]$

$\Delta = r^2 - 4r + r = -3r < 0 \Rightarrow \text{no roots}$

ب) $[n] \geq r \rightsquigarrow D_f = [r, +\infty) \left\{ \begin{array}{l} \xrightarrow{\cap} \emptyset = D_f \\ r \geq [n] \rightsquigarrow D_f = (-\infty, r) \end{array} \right.$