

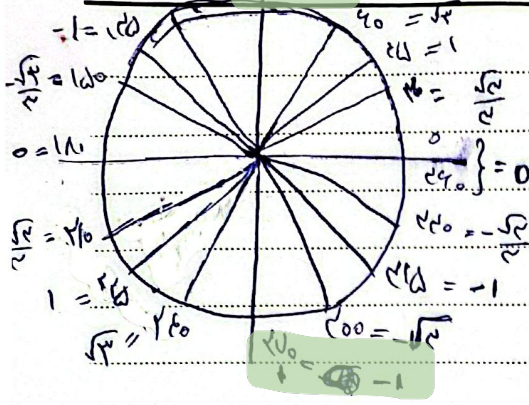
19/11/2020

یارا ابر

مبارک بنیاد

Subject:

Year: _____ Month: _____ Day: _____



$$\tan 90^\circ = \frac{\sin 90^\circ}{\cos 90^\circ} = \frac{1}{0} = \text{تعیین نشده}$$

1/1/20

$$\tan 270^\circ = \frac{-1}{0} = \text{تعیین نشده}$$

دایره مثلثاتی جنبی ناموس را صفری آخر کنیم ضمایم باشد

$$\sin \frac{\pi}{4} + \cos \frac{\pi}{4} + 2 \tan \frac{\pi}{4}$$

$$= \frac{1}{\sqrt{2}} + 1 + 2(-1) = -\frac{1}{\sqrt{2}}$$

$$-\cos \frac{\pi}{4} + \sin \frac{\pi}{4} - 2 \sin \frac{\pi}{4}$$

$$= -\left(-\frac{\sqrt{2}}{2}\right) + \frac{\sqrt{2}}{2} - 2\left(-\frac{\sqrt{2}}{2}\right) = \frac{\sqrt{2}}{2} + \frac{\sqrt{2}}{2} + \sqrt{2} = \frac{3\sqrt{2}}{2}$$

$$\cot \frac{\pi}{4} + \csc \frac{\pi}{4} - 2 \tan \frac{\pi}{4}$$

$$= \frac{\sqrt{2}}{2} + \sqrt{2} - 2\left(-\frac{\sqrt{2}}{2}\right) = \frac{\sqrt{2}}{2} + \sqrt{2} + \sqrt{2} = \frac{5\sqrt{2}}{2}$$

$$\cos(\sin \pi) + \sin(\cos \pi)$$

$$= 1 + 1 = 2$$

$$x^2 + f(x) = x^2 + a + c \xrightarrow{x=a} a^2 + f(a) = a^2 + a + c \rightarrow a^2 + a - c = 0$$

$$\Rightarrow (a+c)(a-1) = 0 \rightarrow a = -c \quad | \quad \rightarrow f(1) = 1^2 + f(1) = 4$$

$$\text{if } x = -c \rightarrow x^2 - b = a + cx \rightarrow 1 - b = a - c \rightarrow 2c = a + b$$

$$\frac{1}{x^2 - 4x} = \frac{1}{x^2(x-4)} \rightarrow x \in \mathbb{R} - \{0, 4\}$$

$$\frac{1}{x^2(x-4)} = \frac{1}{x^2(x+c) + 2(x+c)}$$

$$\Rightarrow \frac{1}{(x+c)(x^2+c)} \rightarrow x \neq -2$$

EHSAN

الف) $y = \sqrt{x-1} + \sqrt{x-5}$

ب) $y = \frac{\sqrt{4-4m}}{\sqrt{4m-4}}$

$\sqrt{x-1} \rightarrow x-1 \geq 0 \rightarrow x \geq 1$

$\sqrt{4-4m} \geq 0 \rightarrow 4-4m \geq 0 \rightarrow 4 \geq 4m \rightarrow 1 \geq m$

$\sqrt{x-5} \rightarrow x-5 \geq 0 \rightarrow x \geq 5$

$\{ \} \rightarrow x \geq 5$

$\sqrt{4m-4} \geq 0 \rightarrow 4m-4 \geq 0 \rightarrow 4m \geq 4 \rightarrow m \geq 1$

$\left. \begin{matrix} 1 \geq m \\ m \geq 1 \end{matrix} \right\} \rightarrow m = 1$

$y = \sqrt{4x-a} + \sqrt{b-4x} \xrightarrow{x=2} \sqrt{8-a} + \sqrt{b-8} = 0$

$\left. \begin{matrix} 8-a=0 \rightarrow a=8 \\ b-8=0 \rightarrow b=8 \end{matrix} \right\} \Rightarrow \frac{b}{a} = 1$

الف) $x^2 - x - 6 = (x-2)(x+3)$

ب) $x^2 - 4x + 6 = (x-1)(x-2)(x+3)$

$x^2 - 4x + 6 = (x^2 - 9)/(x^2 - 4) \cdot (x-2)/(x+3)$

$x^2 - 4x + 6 = (x+1)(x-2)(x+3)$

$\Rightarrow \sqrt{\frac{(x-2)(x+3)}{(x^2)(x+3)(x-2)/(x+3)}} = \frac{-2}{+} \frac{-1}{-} \frac{1}{-} \frac{1}{+}$

$\Rightarrow \frac{-2}{+} \frac{-1}{-} \frac{1}{-} \frac{1}{+} \rightarrow (-\infty, -2) \cup [-1, 1) \cup (3, +\infty)$

$\rightarrow (-\infty, -2) \cup (3, +\infty)$

الف) $2[n] - 5 \geq 0 \rightarrow 2[n] \geq 5$

ب) $2[n] - 4 \geq 0 \rightarrow 2[n] \geq 4$

$[n] \geq 3 \rightarrow n \geq 3$

$[n] \geq 2 \rightarrow n \geq 2$

الف) $n+1 \geq 0 \rightarrow n \geq -1$

$|n-2| \neq 0 \rightarrow n \neq 2$

$4-n \geq 0 \rightarrow 4 \geq n$

$n^2 + 2n + 4 \rightarrow$

ب) $[n] - 5 \geq 0 \rightarrow [n] \geq 5$

$\rightarrow n \geq 5$

$2 - [n] \geq 0 \rightarrow 2 \geq [n] \rightarrow 2 \geq n$

