Nama : Jantra Rizqi Irawati
No : 20
Kelas : 10 mipa 8
Tanggal : 23 Feb 2022

* $0° \leq x \leq 360°$

1. $\sin 2x° = \frac{1}{2}\sqrt{2}$

Jawab :

* $x = \alpha + k \cdot 360$
$2x = 45 + k \cdot 360$
$x = 22,5 + k \cdot 180$

$k = 0 \rightarrow x = 22,5$
$k = 1 \rightarrow x = 202,5$
$k = 2 \rightarrow x = (TM)$

* $x = (180 - \alpha) + k \cdot 360$
$2x = (180 - 45) + k \cdot 360$
$2x = 135 + k \cdot 360$
$x = 67,5 + k \cdot 180$

$k = 0 \rightarrow x = 67,5$
$k = 1 \rightarrow x = 247,5$

HP = {22,5 ; 67,5 ; 202,5 ; 247,5}.

2. $2 \sin (x + 60)° + \sqrt{3} = 0$

Jawab :

* $2 \sin (x + 60°) = -\sqrt{3}$

KKY Dream big and make it happen

$\sin(x+60)^\circ = -\frac{\sqrt{3}}{2}$

$\sin(x+60)^\circ = -\frac{1}{2}\sqrt{3}$

$\sin(x+60)^\circ = \sin 240^\circ$

•) $x = \alpha + k \cdot 360$

$x+60 = 240 + k \cdot 360$

$x = 180 + k \cdot 360$

$k = 0 \rightarrow x = 180$

$k = 1 \rightarrow x = (TM)$

•) $x = (180-\alpha) + k \cdot 360$

$x+60 = (180-240) + k \cdot 360$

$x = (180-240-60) + k \cdot 360$

$x = 0 + k \cdot 360$

$k = 0 \rightarrow x = 0$

$k = 1 \rightarrow x = 360$

Maka HP = {0, 180, 360}.

3. $\cos\left(\frac{1}{5}x - 50\right)^\circ = 0$

$\cos\left(\frac{1}{5}x - 50\right)^\circ = 90^\circ$

Jawab :

No.:

Date:

* $x = \alpha + k \cdot 360$

$\frac{1}{5}x - 50 = 90 + k \cdot 360$

$\frac{1}{5}x = 140 + k \cdot 360$

$x = (140 \cdot \frac{5}{1}) + k \cdot (360 \cdot \frac{5}{1})$

$x = 700 + k \cdot 1800$

$k = 0 \longrightarrow x = 700$ (TM)

\# $x = -\alpha + k \cdot 360$

$\frac{1}{5}x - 50 = -90 + k \cdot 360$

$\frac{1}{5}x = -40 + k \cdot 360$

$x = (-40 \cdot 5) + k \cdot (360 \cdot 5)$

$x = -200 + k \cdot 1800$

$k = 0 \longrightarrow x = -200$ (TM)

Maka HP = { }

4. $2\cos(x - 45^\circ) + 1 = 0$

$2\cos(x - 45)^\circ = -1$

$\cos(x - 45)^\circ = -1/2$

$\cos(x - 45)^\circ = \cos 120$

Jawab.

$x = \alpha + k \cdot 360$

$x - 45 = 120 + k \cdot 360$

$x = 165 + k \cdot 360$

$k = 0 \longrightarrow x = 165$

$k = 1 \longrightarrow x = (TM)$

$x = -\alpha + k \cdot 360$

$x - 45 = -120 + k \cdot 360$

$x = -75 + k \cdot 360$

$k = 0 \longrightarrow x = -75 \ (TM)$

$k = 1 \longrightarrow x = 285$

Maka HP = {285} //.