

Nama :

No. Presensi/Kelas:

Mata Pelajaran : Matematika Peminatan

Kelas/Semester : XI/Ganjil

Petunjuk: Pilihlah salah satu jawaban yang dianggap paling tepat!

1. Himpunan penyelesaian persamaan trigonometri $\sin x = -\frac{1}{2}$, $0 \leq x \leq 2\pi$!
A. $\left\{\frac{7}{6}\pi, \frac{11}{6}\pi\right\}$
B. $\left\{\frac{7}{6}\pi, \frac{13}{6}\pi\right\}$
C. $\left\{\frac{7}{6}\pi, \frac{14}{6}\pi\right\}$
D. $\left\{\frac{7}{6}\pi, \frac{15}{6}\pi\right\}$
E. $\left\{\frac{5}{6}\pi, \frac{13}{6}\pi\right\}$
2. Himpunan penyelesaian persamaan trigonometri $\cos x = -\frac{1}{2}\sqrt{2}$, $0^\circ \leq x \leq 360^\circ$!
A. $\{115^\circ, 225^\circ\}$
B. $\{135^\circ, 225^\circ\}$
C. $\{145^\circ, 225^\circ\}$
D. $\{155^\circ, 225^\circ\}$
E. $\{135^\circ, 235^\circ\}$
3. Himpunan penyelesaian persamaan trigonometri $\tan 6x = \sqrt{3}$, $0 \leq x \leq 2\pi$!
A. $\left\{\frac{1}{18}\pi, \frac{2}{9}\pi, \frac{7}{18}\pi, \frac{5}{9}\pi, \frac{15}{18}\pi, \frac{8}{9}\pi, \frac{18}{18}\pi, \frac{11}{9}\pi, \frac{25}{18}\pi, \frac{14}{9}\pi, \frac{31}{18}\pi, \frac{17}{9}\pi\right\}$
B. $\left\{\frac{1}{18}\pi, \frac{2}{9}\pi, \frac{9}{18}\pi, \frac{5}{9}\pi, \frac{13}{18}\pi, \frac{8}{9}\pi, \frac{18}{18}\pi, \frac{12}{9}\pi, \frac{25}{18}\pi, \frac{15}{9}\pi, \frac{31}{18}\pi, \frac{17}{9}\pi\right\}$
C. $\left\{\frac{1}{18}\pi, \frac{2}{9}\pi, \frac{7}{18}\pi, \frac{5}{9}\pi, \frac{13}{18}\pi, \frac{8}{9}\pi, \frac{19}{18}\pi, \frac{11}{9}\pi, \frac{25}{18}\pi, \frac{14}{9}\pi, \frac{31}{18}\pi, \frac{17}{9}\pi\right\}$
D. $\left\{\frac{1}{18}\pi, \frac{2}{9}\pi, \frac{9}{18}\pi, \frac{5}{9}\pi, \frac{13}{18}\pi, \frac{8}{9}\pi, \frac{18}{18}\pi, \frac{11}{9}\pi, \frac{25}{18}\pi, \frac{14}{9}\pi, \frac{31}{18}\pi, \frac{17}{9}\pi\right\}$
E. $\left\{\frac{1}{18}\pi, \frac{2}{9}\pi, \frac{9}{18}\pi, \frac{5}{9}\pi, \frac{15}{18}\pi, \frac{8}{9}\pi, \frac{18}{18}\pi, \frac{12}{9}\pi, \frac{25}{18}\pi, \frac{14}{9}\pi, \frac{33}{18}\pi, \frac{17}{9}\pi\right\}$

4. Himpunan penyelesaian persamaan trigonometri $\sin 2x + 1 = 0$, $0^\circ \leq x \leq 360^\circ$!
- A. $\{105^\circ, 315^\circ\}$
 - B. $\{115^\circ, 315^\circ\}$
 - C. $\{125^\circ, 325^\circ\}$
 - D. $\{105^\circ, 325^\circ\}$
 - E. $\{135^\circ, 315^\circ\}$
5. Himpunan penyelesaian persamaan trigonometri $3\tan 4x - \sqrt{3} = 0$, $0^\circ \leq x \leq 360^\circ$!
- A. $\{7,5^\circ; 52,5^\circ; 97,5^\circ; 142,5^\circ; 187,5^\circ; 232,5^\circ; 277,5^\circ; 322,5^\circ\}$
 - B. $\{7,5^\circ; 52,5^\circ; 97,5^\circ; 142,5^\circ; 187,5^\circ; 232,5^\circ; 267,5^\circ; 322,5^\circ\}$
 - C. $\{7,5^\circ; 52,5^\circ; 97,5^\circ; 142,5^\circ; 187,5^\circ; 222,5^\circ; 267,5^\circ; 322,5^\circ\}$
 - D. $\{7,5^\circ; 52,5^\circ; 97,5^\circ; 142,5^\circ; 177,5^\circ; 232,5^\circ; 267,5^\circ; 332,5^\circ\}$
 - E. $\{7,5^\circ; 52,5^\circ; 97,5^\circ; 142,5^\circ; 177,5^\circ; 222,5^\circ; 267,5^\circ; 332,5^\circ\}$
6. Himpunan penyelesaian persamaan trigonometri $\cos(x + 75^\circ) = \frac{1}{2}$, $0^\circ \leq x \leq 360^\circ$!
- A. $\{225^\circ, 325^\circ\}$
 - B. $\{225^\circ, 335^\circ\}$
 - C. $\{225^\circ, 345^\circ\}$
 - D. $\{215^\circ, 335^\circ\}$
 - E. $\{215^\circ, 345^\circ\}$
7. Himpunan penyelesaian persamaan trigonometri $\sin\left(x + \frac{1}{5}\pi\right) = 1$, $0 \leq x \leq 2\pi$!
- A. $\left\{\frac{1}{10}\pi\right\}$
 - B. $\left\{\frac{3}{10}\pi\right\}$
 - C. $\left\{\frac{13}{10}\pi\right\}$
 - D. $\left\{\frac{1}{10}\pi, \frac{13}{10}\pi, \right\}$
 - E. $\left\{\frac{1}{10}\pi, \frac{3}{10}\pi, \right\}$

8. Himpunan penyelesaian persamaan trigonometri $\tan(5x - 40^\circ) = -1$, $0^\circ \leq x \leq 360^\circ$!

- A. $\{35^\circ, 71^\circ, 107^\circ, 143^\circ, 179^\circ, 205^\circ, 251^\circ, 287^\circ, 313^\circ, 339^\circ\}$
- B. $\{35^\circ, 71^\circ, 107^\circ, 143^\circ, 179^\circ, 205^\circ, 251^\circ, 287^\circ, 323^\circ, 359^\circ\}$
- C. $\{35^\circ, 71^\circ, 107^\circ, 143^\circ, 179^\circ, 215^\circ, 251^\circ, 227^\circ, 313^\circ, 359^\circ\}$
- D. $\{35^\circ, 71^\circ, 107^\circ, 143^\circ, 179^\circ, 215^\circ, 251^\circ, 287^\circ, 323^\circ, 359^\circ\}$
- E. $\{35^\circ, 71^\circ, 107^\circ, 143^\circ, 179^\circ, 215^\circ, 251^\circ, 287^\circ, 313^\circ, 359^\circ\}$

9. Himpunan penyelesaian persamaan trigonometri $\cos\left(5x - \frac{5}{8}\pi\right) = \frac{1}{2}\sqrt{2}$, $0 \leq x \leq \pi$!

- A. $\left\{\frac{3}{40}\pi, \frac{7}{40}\pi, \frac{19}{40}\pi, \frac{23}{40}\pi, \frac{7}{8}\pi, \frac{37}{40}\pi\right\}$
- B. $\left\{\frac{3}{40}\pi, \frac{7}{40}\pi, \frac{19}{40}\pi, \frac{23}{40}\pi, \frac{7}{8}\pi, \frac{39}{40}\pi\right\}$
- C. $\left\{\frac{3}{40}\pi, \frac{7}{40}\pi, \frac{19}{40}\pi, \frac{21}{40}\pi, \frac{7}{8}\pi, \frac{37}{40}\pi\right\}$
- D. $\left\{\frac{3}{40}\pi, \frac{5}{40}\pi, \frac{19}{40}\pi, \frac{23}{40}\pi, \frac{7}{8}\pi, \frac{37}{40}\pi\right\}$
- E. $\left\{\frac{1}{40}\pi, \frac{7}{40}\pi, \frac{19}{40}\pi, \frac{23}{40}\pi, \frac{7}{8}\pi, \frac{37}{40}\pi\right\}$

10. Himpunan penyelesaian persamaan trigonometri $\tan\left(7x + \frac{2}{3}\pi\right) = \frac{1}{3}\sqrt{3}$, $0 \leq x \leq \pi$!

- A. $\left\{\frac{1}{14}\pi, \frac{3}{14}\pi, \frac{5}{14}\pi, \frac{1}{2}\pi, \frac{9}{14}\pi, \frac{11}{14}\pi, \frac{13}{14}\pi\right\}$
- B. $\left\{\frac{1}{14}\pi, \frac{3}{14}\pi, \frac{5}{14}\pi, \frac{1}{2}\pi, \frac{9}{14}\pi, \frac{12}{14}\pi, \frac{13}{14}\pi\right\}$
- C. $\left\{\frac{1}{14}\pi, \frac{3}{14}\pi, \frac{5}{14}\pi, \frac{1}{2}\pi, \frac{10}{14}\pi, \frac{12}{14}\pi, \frac{13}{14}\pi\right\}$
- D. $\left\{\frac{1}{14}\pi, \frac{3}{14}\pi, \frac{5}{14}\pi, \frac{1}{2}\pi, \frac{8}{14}\pi, \frac{12}{14}\pi, \frac{13}{14}\pi\right\}$
- E. $\left\{\frac{1}{14}\pi, \frac{2}{14}\pi, \frac{5}{14}\pi, \frac{1}{2}\pi, \frac{8}{14}\pi, \frac{12}{14}\pi, \frac{13}{14}\pi\right\}$