



1. $\frac{3\pi}{2} < x < 2\pi$

$$\frac{\sin x + \cos x}{\sin x - \cos x} = \frac{3}{2} \quad \text{ise} \quad \sin 2x \text{ kaçtır?}$$

A) $-\frac{5}{13}$ B) $-\frac{3}{5}$ C) $\frac{12}{13}$ D) $\frac{4}{5}$ E) 1

2. $\sin 250 = x$ ise $\cos 220$ hangisine eşittir?

A) $x^2 - 1$ B) $\frac{x^2 - 1}{2}$ C) $\frac{x^2 + 1}{2}$
D) $2x^2 - 1$ E) $1 - 2x^2$

3. $\frac{\sin 22,5}{\cos 22,5} - \frac{\cos 22,5}{\sin 22,5}$ kesri kaçta eşittir?

A) -2 B) $-\frac{1}{2}$ C) 1 D) $\sqrt{2}$ E) $\sqrt{3}$

4. $\cos x = a$ ve $\sin x = b$

$$\frac{a^3 - b^3}{1 + a \cdot b} \cdot (a + b)$$
 aşağıdakilerden hangisine eşittir?

A) $\operatorname{cosec} 2x$ B) $\cot x$ C) $\tan x$
D) $\sec 2x$ E) $\cos 2x$

5. $\frac{\sin 12}{1 + \cos 12} \cdot \frac{\cos 6}{1 + \cos 6}$ ifadesi neye eşittir?

A) $\sin 3$ B) $\cos 3$ C) $\tan 3$ D) $\cot 3$ E) 3

6. $4 \sin x \cdot \cos^3 x - 4 \cos x \cdot \sin^3 x = 1$ ise x kaç radyandır?

A) $\frac{\pi}{8}$ B) $\frac{\pi}{6}$ C) $\frac{\pi}{4}$ D) $\frac{\pi}{3}$ E) $\frac{\pi}{2}$

7. $\frac{\cos^4 46 - \cos^4 44}{\sin 46 \cdot \sin 44}$

ifadesi aşağıdakilerden hangisine eşittir?

A) $-\sec 4$ B) $-2\cot 3$ C) $-2\tan 2$
D) $\frac{\operatorname{cosec} 2}{2}$ E) $\sin 1$

8. $\cos 40 = m$ ise

 $\sin 10 \cdot \sin 80 \cdot \sin 100 \cdot \sin 170$ hangisine eşittir?

A) $-2m$ B) $-\frac{m}{2}$ C) $\frac{1-m}{8}$
D) $\frac{m+2}{8}$ E) $\frac{m+1}{4}$



9. $0 < x < \frac{\pi}{2}$

$\frac{1 + \sin 2x}{\sin x + \cos x} - \frac{1}{\sec x}$ aşağıdakilerden hangisine eşittir?

- A) $\sin x$ B) $\cos x$ C) $\tan x$
D) $\cos x$ E) $\cos \sec x$

10. $\pi < x < \frac{3\pi}{2}$

$\cot x = \frac{3}{4}$ ise $\cos \frac{x}{2}$ kaçadır?

- A) $-\frac{3}{\sqrt{5}}$ B) $-\frac{2}{\sqrt{5}}$ C) $-\frac{1}{\sqrt{5}}$
D) $-\frac{1}{2\sqrt{5}}$ E) $-\frac{1}{5}$

11. $2\sin^2 \frac{x}{2} + \cos \frac{x}{2} \cdot \sin \frac{x}{2} = 1$ ise $\tan x$ kaçadır?

- A) $\frac{1}{4}$ B) 1 C) $\sqrt{3}$ D) 2 E) 3

12. $\frac{3\pi}{2} < x < 2\pi$

$\frac{\sqrt{1 - \cos 2x}}{\sqrt{1 + \cos 2x}}$ ifadesi hangisine eşittir?

- A) -1 B) $-\frac{1}{2}$ C) $\frac{1}{2}$
D) $-\tan x$ E) $\cot x$

13. $\frac{2}{\sin 2x} - \cot x = \frac{1}{2}$ ise $\tan 2x$ kaçadır?

- A) $\frac{1}{3}$ B) $\frac{1}{2}$ C) $\frac{3}{2}$ D) $\frac{4}{3}$ E) $\frac{5}{3}$

14. $2 \cos \frac{\pi}{12} \left(\cos \frac{\pi}{12} + \sin \frac{\pi}{12} \right)$ ifadesi kaçadır?

- A) $\frac{\sqrt{5}+1}{2}$ B) $\frac{\sqrt{6}-1}{2}$ C) $\frac{3+\sqrt{3}}{2}$
D) $1+\sqrt{2}$ E) $\sqrt{2}-1$

15. $\frac{2 \tan x}{(1 - \tan x)(1 + \tan x)} = 3$ ise $\tan 4x$ kaçadır?

- A) $-\frac{7}{3}$ B) $-\frac{3}{4}$ C) $-\frac{1}{2}$ D) 0 E) $\frac{3}{5}$

16. $\cos 20^\circ \cdot \cos 40^\circ \cdot \cos 80^\circ$ kaçadır?

- A) $\frac{3}{16}$ B) $\frac{1}{8}$ C) $\frac{3}{4}$ D) $\frac{1}{2}$ E) 1