



1. Aşağıdakilerden hangileri doğrudur?

- I) $\sin 18 \cdot \cos 12 + \sin 12 \cdot \cos 18 = \frac{1}{2}$
- II) $\cos 78 \cdot \cos 12 - \sin 78 \cdot \sin 12 = 0$
- III) $\cos 50 \cdot \cos 5 + \sin 50 \cdot \sin 5 = \frac{\sqrt{2}}{2}$
- IV) $\sin 71 \cdot \cos 11 - \sin 11 \cdot \cos 71 = \frac{\sqrt{3}}{4}$



- A) I,II B) II,III C) II,IV D) I,III E) I,II,III

2. $\frac{\sin 40 \cdot \sin 70 + \sin 20 \cdot \cos 40}{\cos 50 \cdot \cos 5 + \cos 40 \cdot \sin 5}$ işleminin sonucu aşağıdakilerden hangisidir?

- A) 0 B) $\frac{1}{2}$ C) $\frac{\sqrt{2}}{2}$ D) $\frac{\sqrt{3}}{2}$ E) $\frac{\sqrt{6}}{2}$



3. $\cos(4x + 3y) \cdot \sin(2y + 4x) - \sin(4x + 3y) \cdot \cos(2y + 4x) = 1$ ise y kaç radyandır?

- A) $\frac{\pi}{6}$ B) $\frac{5\pi}{6}$ C) π D) $\frac{7\pi}{6}$ E) $\frac{3\pi}{2}$



4. $\frac{\sin(30 - x)}{\cos(x - 60)} = \frac{1}{2}$ ise $\tan x$ kaç eşittir?

- A) $\frac{1}{6}$ B) $\frac{\sqrt{3}}{9}$ C) $\frac{\sqrt{2}}{3}$ D) 1 E) $\sqrt{3}$



5. $\sin 50 + \tan 20 \cdot \cos 50$ işleminin sonucu aşağıdakilerden hangisidir?

- A) 1 B) $\tan 20$ C) $\cot 20$ D) $\sec 20$ E) 2



6. Dar açılı bir ABC üçgeninde

$3 \cdot \sin A - \sin B \cdot \cos C - \sin C \cdot \cos B = \sqrt{2}$ ise A açısı kaç derecedir?

- A) 15° B) 30° C) 45° D) 60° E) 75°



7. $\sin x \cdot \sin y = \frac{2}{3}$ ve $\tan x \cdot \tan y = 2$ ise $\cos(x + y)$ kaç eşittir?

- A) $-\frac{1}{3}$ B) $-\frac{1}{6}$ C) $-\frac{2}{9}$ D) $-\frac{1}{4}$ E) $-\frac{2}{5}$



8. $\frac{3\pi}{2} < x < 2\pi$ ve $\frac{3\pi}{2} < y < 2\pi$ $\sin x = -\frac{3}{\sqrt{10}}$ ve $\cos y = \frac{1}{\sqrt{5}}$ ise $\sin(x + y)$ kaçtır?

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





9. $\tan 195$ kaçadır?

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



10. $\frac{\sin 43 + \sin 17}{\cos 43 + \cos 17}$ işleminin sonucu kaçtır?

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



11. $\sin x = \frac{3}{5}$ ve $\tan x \cdot \tan y = \frac{2}{5}$ ise $\tan(x-y)$ kaçtır?

- A) $\frac{11}{101}$ B) $\frac{13}{84}$ C) $\frac{21}{91}$ D) $\frac{35}{111}$ E) $\frac{41}{144}$

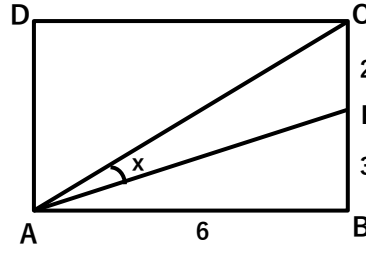


12. $\tan 5 = a$ ise $\tan 40$ aşağıdakilerden hangisine eşittir?

- A) $\frac{1}{1-a}$ B) $\frac{1-a}{1+a}$ C) $\frac{1}{1+a}$
D) $\frac{1+a}{1-a}$ E) $\frac{1}{1+a}$



13.

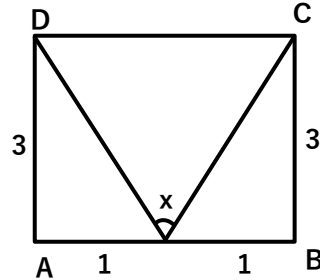


- A) $\frac{11}{8}$ B) $\frac{13}{6}$ C) $\frac{17}{4}$ D) $\frac{21}{11}$ E) $\frac{23}{9}$

Yandaki dikdörtgende $\cot x$ kaçadır?



14.

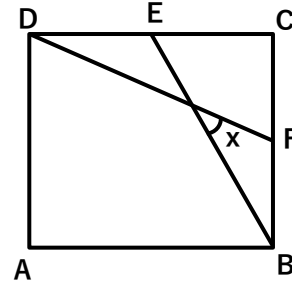


- A) $-\frac{2}{3}$ B) $\frac{3}{5}$ C) $\frac{4}{5}$ D) $\frac{3}{4}$ E) $\frac{6}{5}$

Yandaki dikdörtgende $\sin x$ kaçadır?



15.

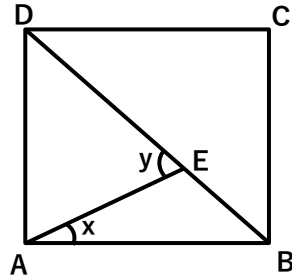


- A) $\frac{1}{5}$ B) $\frac{8}{15}$ C) $\frac{3}{4}$ D) $\frac{4}{5}$ E) $\frac{12}{5}$

Yandaki ABCD karesinde $IDEI = IECI = ICFI = IFBI$ ise $\tan x$ kaçadır?



16.



- A) $\frac{1}{\sqrt{3}}$ B) $\frac{3}{\sqrt{5}}$ C) $\frac{2}{\sqrt{6}}$ D) $\frac{3}{\sqrt{10}}$ E) $\frac{4}{\sqrt{7}}$

Yandaki ABCD karesinde $\tan x = 2$ ise $\sin y$ kaçadır?

