

12. Sınıf – Belirsiz İntegral

Adı Soyadı:

Sınıfı:

No:

Tarih / Puan



1) Aşağıdaki belirsiz integrali bulunuz:

$$\int 2 \sec^2(3x - 5) dx$$

A) $\frac{2}{3} \cot(3x - 5) + C$

B) $-(\frac{2}{3} \tan(3x - 5)) + C$

C) $2 \tan(3x - 5) + C$

D) $\frac{2}{3} \sec(3x - 5) + C$

E) $\frac{2}{3} \tan(3x - 5) + C$

2) Aşağıdaki belirsiz integrali bulunuz (trig dönüşüm):

$$\int \sqrt{5^2 - x^2} dx$$

A) $x\sqrt{5^2 - x^2} + 5^2 \arcsin\left(\frac{x}{5}\right) + C$

B) $\sqrt{5^2 - x^2} + C$

C) $\frac{x}{2} \sqrt{5^2 - x^2} + \frac{5^2}{2} \arcsin\left(\frac{x}{5}\right) + C$

D) $\frac{x}{2} \sqrt{5^2 - x^2} + \frac{5^2}{2} \arcsin\left(\frac{x}{5}\right) + C$

E) $\frac{x}{2} \sqrt{5^2 - x^2} - \frac{5^2}{2} \arcsin\left(\frac{x}{5}\right) + C$

3) Aşağıdaki belirsiz integrali bulunuz:

$$\int \frac{1}{\sqrt{x^2 - 6^2}} dx$$

A) $\ln|x + \sqrt{x^2 + 6^2}| + C$

B) $\arccos\left(\frac{x}{6}\right) + C$

C) $\sqrt{x^2 - 6^2} + C$

D) $\ln|x| + C$

E) $\ln|x + \sqrt{x^2 - 6^2}| + C$

4) Aşağıdaki belirsiz integrali bulunuz:

$$\int -2 \sin(-2x - 4) dx$$

A) $-\cos(-2x - 4) + C$

B) $-2 \cos(-2x - 4) + C$

C) $-(-\cos(-2x - 4)) + C$

D) $1 \cos(-2x - 4) + C$

E) $-1 \sin(-2x - 4) + C$

5) Aşağıdaki belirsiz integrali bulunuz:

$$\int \frac{1}{\sqrt{x^2-6^2}} dx$$

- A) $\ln |x + \sqrt{x^2 - 6^2}| + C$
 B) $\ln |x + \sqrt{x^2 + 6^2}| + C$
 C) $\ln |x| + C$
 D) $\arccos \left(\frac{x}{6} \right) + C$
 E) $\sqrt{x^2 - 6^2} + C$

6) Aşağıdaki belirsiz integrali bulunuz:

$$\int \frac{6}{x} dx$$

- A) $\ln |x| + C$
 B) $-(6 \ln |x|) + C$
 C) $6x + C$
 D) $6 \ln |x| + C$
 E) 8

7) Aşağıdaki belirsiz integrali bulunuz:

$$\int 4e^{x-2} dx$$

- A) $4e^x + C$
 B) $-(4e^{x-2}) + C$
 C) $4e^{x-2} + C$
 D) $4e^{x-2} + -2 + C$
 E) $4(x-2)e^{x-2} + C$

8) Aşağıdaki belirsiz integrali bulunuz:

$$\int \frac{-6}{\sqrt{1-x^2}} dx$$

- A) $-(-6 \arcsin x) + C$
 B) $-6 \ln |1 - x^2| + C$
 C) $-6 \sin x + C$
 D) $\arctan x + C$
 E) $-6 \arcsin x + C$

9) Aşağıdaki belirsiz integrali bulunuz:

$$\int -10^{4x+1} dx$$

- A) $-\frac{1}{4}10^{4x+1} + C$
 B) $\frac{-1}{4 \ln 10}10^x + C$
 C) $\frac{-1}{\ln 10}10^{4x+1} + C$
 D) $-\left(\frac{-1}{4 \ln 10}10^{4x+1}\right) + C$
 E) $\frac{-1}{4 \ln 10}10^{4x+1} + C$

10) Aşağıdaki belirsiz integrali bulunuz:

$$\int 2(-3x + 6)^3 dx$$

- A) $\frac{1}{6}(-3x + 6)^4 + C$
 B) $-\frac{1}{6}(-3x + 6)^4 + C$
 C) $-\frac{1}{6}(-3x + 6)^3 + C$
 D) $-\frac{2}{3}(-3x + 6)^4 + C$
 E) $\frac{1}{2}(-3x + 6)^4 + C$

11) Aşağıdaki belirsiz integrali bulunuz (trig dönüşüm):

$$\int \sqrt{5^2 - x^2} dx$$

- A)** $\frac{x}{2}\sqrt{5^2 - x^2} + \frac{5^2}{2}\arcsin\left(\frac{x}{5}\right) + C$
B) $x\sqrt{5^2 - x^2} + 5^2\arcsin\left(\frac{x}{5}\right) + C$
C) $\frac{x}{2}\sqrt{5^2 - x^2} - \frac{5^2}{2}\arcsin\left(\frac{x}{5}\right) + C$
D) $\sqrt{5^2 - x^2} + C$
E) $\frac{x}{2}\sqrt{5^2 - x^2} + \frac{5^2}{2}\arcsin\left(\frac{x}{5}\right) + C$

12) Aşağıdaki belirsiz integrali bulunuz:

$$\int \frac{-3}{2x+4} dx$$

- A)** $-\frac{3}{2}\ln|2x+4| + C$
B) $\ln|2x+4| + C$
C) $-3\ln|2x+4| + C$
D) $-(-\frac{3}{2}\ln|2x+4|) + C$
E) $-\frac{3}{2}2x+4 + C$

13) Aşağıdaki belirsiz integrali bulunuz:

$$\int \cos(3x+4) dx$$

- A)** $\frac{1}{3}\sin(3x+4) + C$
B) $1\sin(3x+4) + C$
C) $-(\frac{1}{3}\sin(3x+4)) + C$
D) $\frac{1}{3}\cos(3x+4) + C$
E) $-\frac{1}{3}\sin(3x+4) + C$

14) Aşağıdaki belirsiz integrali bulunuz:

$$\int \frac{-2}{\sqrt{1-x^2}} dx$$

- A)** $-2\arcsin x + C$
B) $-2\sin x + C$
C) $\arctan x + C$
D) $-(-2\arcsin x) + C$
E) $-2\ln|1-x^2| + C$

15) Aşağıdaki belirsiz integrali bulunuz:

$$\int \frac{-6}{-x-3} dx$$

- A)** $-6\ln|-x-3| + C$
B) $\ln|-x-3| + C$
C) $-(6\ln|-x-3|) + C$
D) $6\ln|-x-3| + C$
E) $6-x-3 + C$

16) Aşağıdaki belirsiz integrali bulunuz:

$$\int e^{-4x-3} dx$$

- A)** $-\frac{1}{4}(-4x-3)e^{-4x-3} + C$
B) $-(-\frac{1}{4}e^{-4x-3}) + C$
C) $-\frac{1}{4}e^{-4x-3} + C$
D) $1e^{-4x-3} + C$
E) $-\frac{1}{4}e^x + C$

17) Aşağıdaki belirsiz integrali bulunuz (parçalı rasyonel):

$$\int \frac{-2}{x^2-9^2} dx$$

- A)** $-\frac{2}{9} \ln \left| \frac{x-9}{x+9} \right| + C$
B) $-\frac{1}{9} \ln \left| \frac{x+9}{x-9} \right| + C$
C) $-(-\frac{1}{9} \ln \left| \frac{x-9}{x+9} \right|) + C$
D) $-\frac{1}{9} \ln |x^2 - 9^2| + C$
E) $-\frac{1}{9} \ln \left| \frac{x-9}{x+9} \right| + C$

18) Aşağıdaki belirsiz integrali bulunuz:

$$\int 4 \sec^2(-4x + 3) dx$$

- A)** $-\tan(-4x + 3) + C$
B) $-1 \sec(-4x + 3) + C$
C) $-(-\tan(-4x + 3)) + C$
D) $4 \tan(-4x + 3) + C$
E) $-1 \cot(-4x + 3) + C$

19) Aşağıdaki belirsiz integrali bulunuz:

$$\int \frac{4}{x-4} dx$$

- A)** $4 \ln |x| + C$
B) $4x - 4 + C$
C) $\ln |x - 4| + C$
D) $4 \ln |x - 4| + C$
E) $-(4 \ln |x - 4|) + C$

20) Aşağıdaki belirsiz integrali bulunuz (parçalı rasyonel):

$$\int \frac{3}{x^2-1^2} dx$$

- A)** $\frac{3}{2} \ln \left| \frac{x-1}{x+1} \right| + C$
B) $\frac{3}{2} \ln \left| \frac{x+1}{x-1} \right| + C$
C) $-(\frac{3}{2} \ln \left| \frac{x-1}{x+1} \right|) + C$
D) $\frac{3}{2} \ln |x^2 - 1^2| + C$
E) $3 \ln \left| \frac{x-1}{x+1} \right| + C$

Cevap Anahtarı

1) E	2) D	3) E	4) A	5) A
6) D	7) C	8) E	9) E	10) B
11) E	12) A	13) A	14) A	15) D
16) C	17) E	18) A	19) D	20) A

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