

1. Soruda, I. Gruptaki kümelerin şekilleri birer rakamla gösterilerek II. Gruptaki sayılar elde edilmiştir. Soru işaretiyle belirtilen kümenin hangi sayıyla gösterildiğini bulunuz.

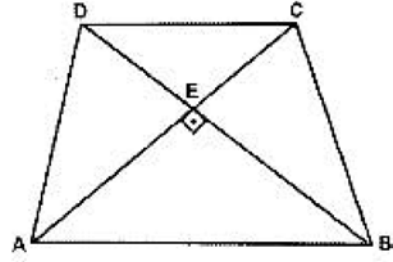
1. \perp \parallel
- | | | | | |
|----------------|----------------|----------------|----------------|---|
| \oplus | \updownarrow | \bullet | \otimes | $\left\{ \begin{array}{l} 6189 \\ 2897 \\ 2575 \\ 6921 \\ 9216 \end{array} \right.$ |
| \bullet | \diamond | \updownarrow | $*$ | |
| \oplus | \otimes | \diamond | \updownarrow | |
| \updownarrow | \bullet | \otimes | \oplus | |
| \bullet | \emptyset | $*$ | \emptyset | |
- \updownarrow \emptyset \otimes \oplus = ?
- A)7692 B)8152 C)9527
D)9527 E)9516

7. Verilen parçalar kullanılarak oluşturulan şekli bulunuz.



- A)
- B)
- C)
- D)
- E)

8.



ABCD Yamuk, $[AB] \parallel [DC]$, $[AC] \perp [DB]$,
 $|AC| = 5$, $|BD| = 10$.

$|DC| + |AB| = ?$

- A) $5\sqrt{5}$ B) 10 C) $2\sqrt{30}$
D) $2\sqrt{34}$ E) 15

13. $\sum_{k=2}^{\infty} \left(\frac{1}{2k^2 - 2} \right) = ?$

- A) $\frac{1}{4}$ B) $\frac{1}{2}$ C) $\frac{3}{2}$
D) $\frac{3}{8}$ E) $\frac{3}{5}$

14. $\int_0^2 \frac{2x}{x+2} dx = ?$

- A) $2 - 2\ln 2$ B) $2\ln 2$ C) $2 + \ln 2$
D) $4 - 4\ln 2$ E) $2 - \ln 2$

19. $t \in \mathbb{R}$ $0 < t < 1$ olmak üzere, $x = 3t^2 - 4t$ ve $y = t^3 - t$ olduğuna göre, $y = f(x)$ fonksiyonunun $x = -1$ deki türevi kaçtır?

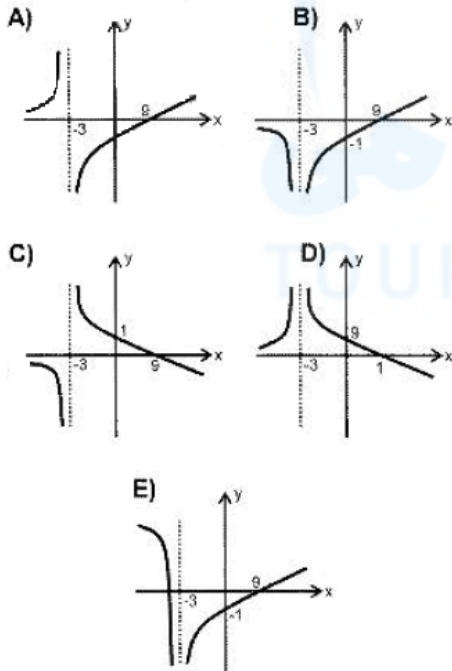
- A) $-\frac{4}{3}$ B) $-\frac{1}{3}$ C) 1
D) $\frac{1}{3}$ E) $\frac{2}{3}$

23. $\int \frac{2}{x^2 + 2x} dx = ?$

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

24. $y = \frac{x-9}{(x+3)^2}$

fonksiyonunun grafiği aşağıdakilerden hangisidir?



30. $\lim_{x \rightarrow -1} \frac{3^x - \frac{1}{3}}{\ln(x+2)} = ?$

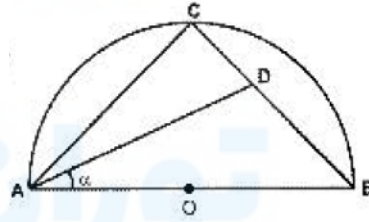
- A) -1 B) 0 C) $\ln 3$
D) $-\ln \sqrt[3]{3}$ E) $\ln \sqrt[3]{3}$

32. $A = \{3, 4, \{5\}, \{6, 7\}, \emptyset\}$ kümesi veriliyor.

Buna göre aşağıdakilerden hangisi yanlıştır?

- A) $3 \in A$ B) $\{4\} \subset A$
C) $\{\{6, 7\}\} \subset A$ D) $\{\emptyset\} \subset A$
E) $\{5\} \notin A$

38.



O merkezli yarım çemberde,

$3|AC| = 4|BC|$, $|BD| = 2|CD|$,

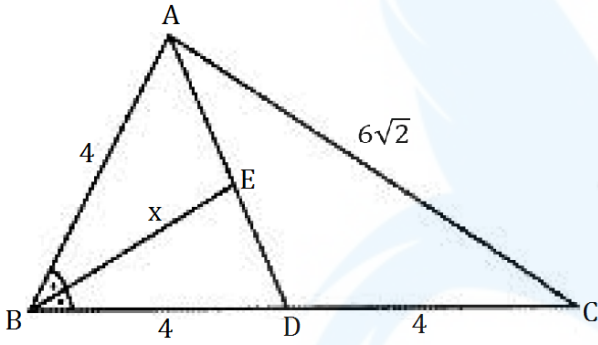
$m(\widehat{BAD}) = a$ olduğuna göre, $\cot a = ?$

- A) $\frac{5}{2}$ B) $\frac{19}{8}$ C) $\frac{19}{11}$
D) $\frac{9}{5}$ E) $\frac{9}{2}$

41. $f(x) = \cos 8x \Rightarrow f''(x) = ?$

- A) $8^3 \sin 8x$
 B) $8^2 \cos 8x$
 C) $-8^2 \cos 8x$
 D) $-8^2 \sin 8x$
 E) $-8^4 \cos 8x$

44.



ABC üçgeni için, $[BE]$ açıortay,

$|AB| = |BD| = |DC| = 4 \text{ cm}$ ve $|AC| = 6\sqrt{2} \text{ cm}$

olduğuna göre $|BE| = x = ?$

- A) $\sqrt{15}$ B) $2\sqrt{3}$ C) $\sqrt{10}$
 D) 3 E) $2\sqrt{2}$

48. $\frac{d}{dx} \left(\int_2^6 \left(\frac{x+1}{x^2-x+1} \right) dx \right) = ?$

- A) 1 B) $\frac{9}{2}$ C) -1
 D) 0 E) -2

56. $\lim_{x \rightarrow 0} \frac{\sin 3x}{\tan 3x} = ?$

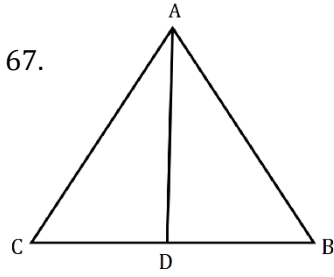
- A) $\frac{2}{3}$ B) 2 C) $\frac{1}{3}$ D) 1 E) $\frac{2}{27}$

65. $(x-1) \cdot P(x+2) = x^2 + mx + 1$ olduğuna göre, $P(x)$ Polinomunun katsayıların toplamı kaçtır?

- A) -2 B) 8 C) 5
 D) -6 E) 3

66. $\int \frac{\sin x}{1 - \cos x} d(\cos x) = ?$

- A) $\sin x - x + c$ B) $-x - \sin x + c$
 C) $x + \sin x + c$ D) $x - \cos x + c$
 E) $\sin x - \cos x + c$



ABC üçgeninde $[AD]$ açıortay, $|AB| = 6$

, $|AC| = 8$, $|DB| = x$ ve $x \in \mathbb{Z}$

Buna göre x ' in alabileceği en büyük değer nedir?

- A)3 B)4 C)5 D)6 E)7

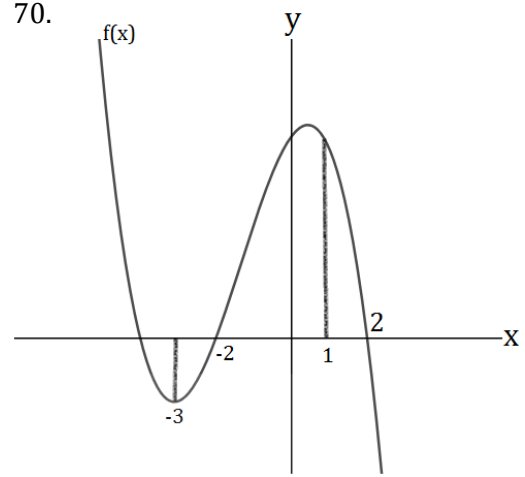
68. $\lim_{x \rightarrow 4} \frac{x^2 + 4x - 32}{x^3 - 4x} = ?$

- A) $\frac{3}{11}$ B) $\frac{5}{11}$ C)0 D) $\frac{4}{11}$ E) $\frac{1}{4}$

69. $\tan x < 0$ olduğuna göre aşağıdakilerden

hangisi kesinlikle negatiftir ?

- A) $\sin^2 x \cdot \cos x$ B) $\cos^2 x \cdot \sin x$
 C) $-\cot x$ D) $\cos^2 x - \sin^2 x$
 E) $\cos x \cdot \sin x$

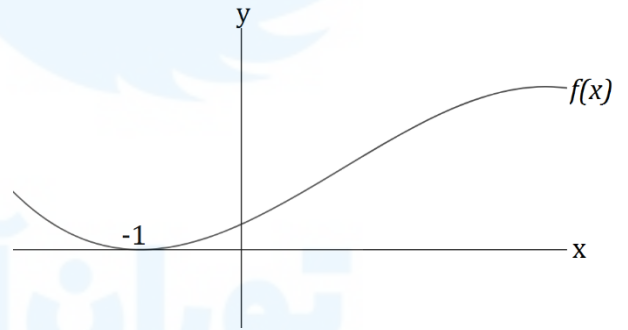


$A = \{x \mid f'(x) > 0, x \in \mathbb{Z}\}$

buna göre $n(A) = ?$

- A) -6 B)1 C)2 D)3 E)4

71.



$f''(x) = 6x + 2 \Rightarrow f(0) = ?$

- A) -2 B) -1 C)0 D)1 E)2

$$72. f(x^2 + x + 1) = 2x - 5$$

$$(f^{-1})'(1) = ?$$

$$A) \frac{9}{2} \quad B) \frac{7}{2} \quad C) 3 \quad D) 2 \quad E) \frac{1}{2}$$

$$73. f(x) = \begin{cases} ax^2 + 2x, & x \geq -1 \\ 2bx + 2, & x < -1 \end{cases}$$

$\forall x \in \mathbb{R}$ x' in türevi vardır.

buna göre $a \cdot b = ?$

$$A) -6 \quad B) 6 \quad C) 2 \quad D) -2 \quad E) 4$$

Cevap Anahtarı

1. E	7. B	8. A
13. D	14. D	19. C
23. B	26. B	30. E
32. E	38. B	41. C
44. D	48. D	56. D
65. A	66. B	67. E
68. C	69. E	70. D
71. B	72. B	73. D

ملاحظة: بعض الأسئلة في هذا الكتيب لم تقم جامعة سلجوك بنشرها بل قام بعض الطلاب بتسريبها ونشرها لكي يستفيد الطلاب من بعدهم.

طريقة التسريب: تذكر الأسئلة بعد الخروج من الإمتحان (غير ممنوع). "24 سؤال"