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

1.

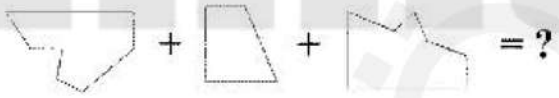
I	II
⊕ ⇳ • ⊗	6189
• ◊ ⇳ *	2897
⊕ ⊗ ◊ ⇳	2575
⇳ • ⊗ ⊕	6921
• Θ * Θ	9216

⇳ Θ ⊗ ⊕ = ?

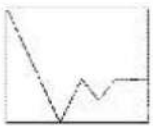
A)7692 B)8152 C)9527

D)9527 E)9516

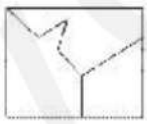
7. Verilen parçalar kullanılarak oluşturulan şekli bulunuz.



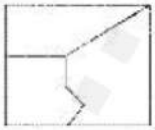
A)



B)



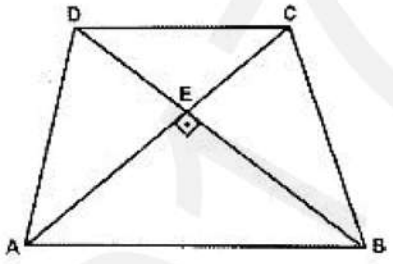
C)



D)

E)

8.



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

$|DC| + |AB| = ?$

$A)5\sqrt{5}$ $B)10$ $C)2\sqrt{30}$

$D)2\sqrt{34}$ $E)15$

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

$A)2 - 2ln2$ $B)2ln2$ $C)2 + ln2$

$D)4 - 4ln2$ $E)2 - ln2$

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

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

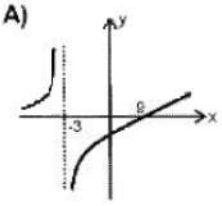
$C) \ln|x+2| + c$ $D) x - \ln|x+1| + c$

$E) 2x + \ln\left|\frac{x}{x+2}\right| + c$

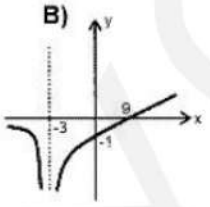
24. $y = \frac{x-9}{(x+3)^2}$

fonksiyonunun grafiği aşağıdakilerden hangisidir?

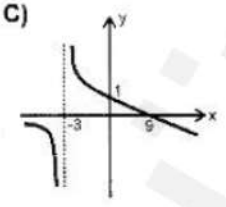
A)



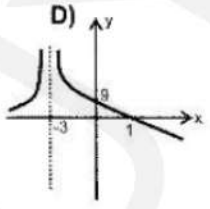
B)



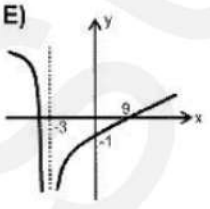
C)



D)



E)



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

$A) -1$ $B) 0$ $C) ln3$

$D) -ln\sqrt[3]{3}$ $E) ln\sqrt[3]{3}$

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

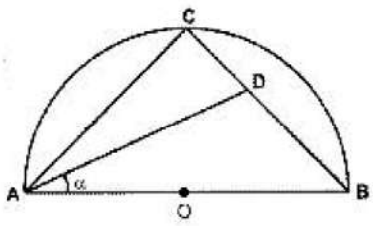
Buna göre aşağıdakilerden hangisi yanlıştır?

$A)\ 3 \in A$ $B)\ \{4\} \subset A$

$C)\ \{\{6,7\}\} \subset A$ $D)\ \{\emptyset\} \subset A$

$E)\ \{5\} \notin A$

38.



O merkezli yarım çemberde,

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

$m(B\hat{A}D) = a$ olduğuna göre, $cota = ?$

$A) \frac{5}{2}$ $B) \frac{19}{8}$ $C) \frac{19}{11}$

$D) \frac{9}{5}$ $E) \frac{9}{2}$

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

$A) 8^3 \sin 8x$

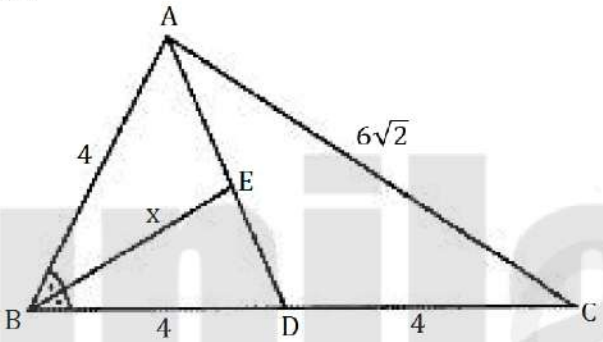
$B) 8^2 \cos 8x$

$C) -8^2 \cos 8x$

$D) -8^2 \sin 8x$

$E) -8^4 \cos 8x$

44.



ABC üçgeni için, $[BE]$ açıortay,

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

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

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

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

$A) -2$ $B)8$ $C)5$

$D) -6$ $E)3$

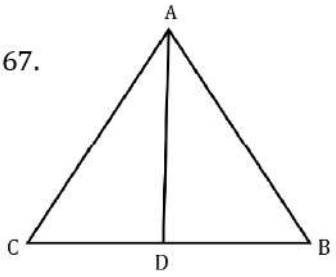
66. $\int \frac{sinx}{1-cosx} d(cosx) = ?$

$A) sinx - x + c$ $B) -x - sinx + c$

$C) x + sinx + c$ $D) x - cosx + c$

$E) sinx - cosx + c$

67.



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

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

Buna göre x' in alabileceği en büyük değer nedir?

$A)3 \quad B)4 \quad C)5 \quad D)6 \quad E)7$

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

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

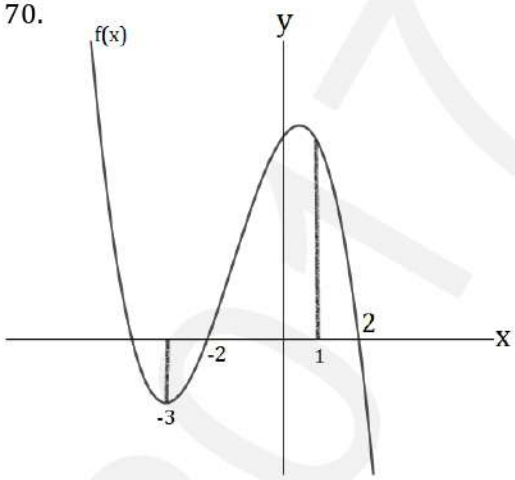
69. $tanx < 0$ oluduğuna göre aşğıdakilerden hangisi kesinlikle negatiftir ?

$A)\sin^2 x \cdot \cos x \quad B)\cos^2 x \cdot \sin x$

$C) - cotx \quad D)\cos^2 x - \sin^2 x$

$E)cosx \cdot sinx$

70.

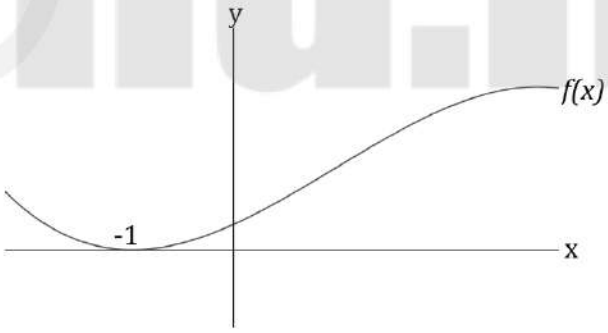


$A = \{x|\ f'(x) > 0,\ x \in Z\}$

buna göre $n(A) = ?$

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

71.



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

$A) - 2 \quad B) - 1 \quad C)0 \quad D)1 \quad E)2$

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

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

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

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

$\forall x \in R$ x' in türevi vardır.

buna göre $a\cdot b=?$

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

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 البعدهم.

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