MATEMATIKA

61. Tenglamalar sistemasini yeching:
$$\begin{cases}(x+xy^2+y^2)(x+y^2)^2=225\\(x-xy^2+y^2)(x+y^2)^2=25\end{cases}$$
$A)(4;1),(4;-1)$ $B)(-4;1),(4;-1),(1;2),(1;-2)$
$C)(4;1),(4;-1),(1;2),(1;-2)$ $D)(1;2),(1;-2)$

62. Tenglamalar sistemasini yeching:
$$\begin{cases}x+y+xy=0\\x^3+y^3+x^3y^3=12\end{cases}$$
$A)(1+\sqrt{3};1-\sqrt{3}),(1-\sqrt{3};1+\sqrt{3})$
$B)(1;\sqrt{3}),(\sqrt{3};1)$ $C)(1-\sqrt{3};1+\sqrt{3})$
$D)(1+\sqrt{3};1+\sqrt{3}),(1-\sqrt{3};1-\sqrt{3})$

63. Tenglamalar sistemasini yeching:
$$\begin{cases}y-log_3x=1\\x^y=3^{12}\end{cases}$$
$A)\left(\frac{1}{81};3\right),(27;4)$ $B)\left(\frac{1}{81};-3\right),(27;2)$
$C)\left(\frac{1}{81};-3\right),(81;4)$ $D)\left(\frac{1}{81};-3\right),(27;4)$

64. a ning qanday eng katta butun qiymatida $3x^2-18x-3>a$ tengsizlik x ning barcha qiymatlarida o'rinli bo'ladi?
$A)-29$ $B)-32$ $C)-30$ $D)-31$

65. $\frac{(8-x)^2}{x-3}>0$ tengsizlikning $[-1;9]$ oraliqda yotuvchi butun yechimlari yig'indisini toping.
$A)17$ $B)31$ $C)42$ $D)39$

66. $2^{log_{0,4}(x)\cdot log_{0,4}(2,5x)}>1$ tengsizlikning eng kichik natural yechimini toping.
$A)2$ $B)4$ $C)3$ $D)1$

67. $log_{0,2}^2(x-1)>4$ tengsizlikni yeching.
$A)(0;1,04)\cup(5;\infty)$ $B)(26;\infty)$
$C)(1;26)$ $D)(1;1,04)\cup(26;\infty)$

68. $\frac{5}{|x+2|+2}>|x+2|-2$ tengsizlikni qanoatlantiruvchi butun sonlar nechta?
$A)4\ ta$ $B)7\ ta$ $C)5\ ta$ $D)6\ ta$

69. $2^{\sqrt{x+1}}-6<2^{4-\sqrt{x+1}}$ tengsizlikni qanoatlantiruvchi eng katta va eng kichik butun sonlar ayirmasini toping.
$A)6$ $B)7$ $C)9$ $D)8$

70. $y=\sqrt{3x-7}+\frac{\sqrt{4-x}}{x-3}$ funksiyaning aniqlanish sohasini toping.
$A)\left(-\infty;\frac{7}{3}\right]\cup[43;\infty)$ $B)\left[\frac{7}{3};4\right]$
$C)\left[\frac{7}{3};3\right)\cup(3;4]$ $D)\left(\frac{7}{3};3\right)\cup(3;4)$

71. $f(x)=\left(\frac{1}{3}\right)^{x^2-6x+11}$ funksiyaning aniqlanish sohasini toping.
$A)(0;9]$ $B)[-9;\infty)$ $C)\left(0;\frac{1}{9}\right]$ $D)[9;\infty)$

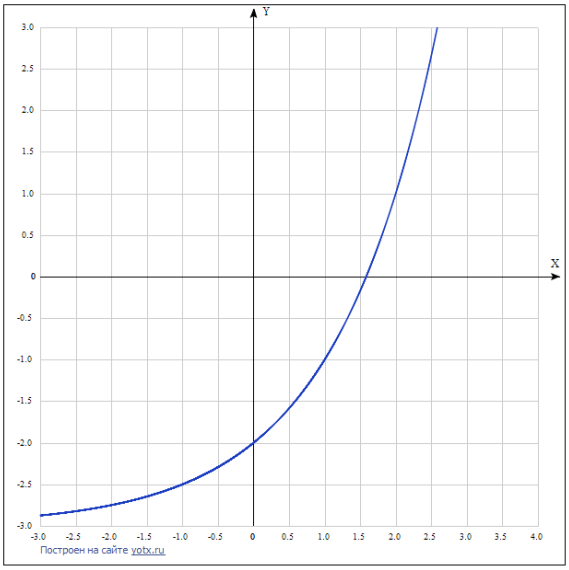
72. $y=\sqrt{log_{\frac{1}{3}}(x^2-2x)+1}$ funksiyaning aniqlanish sohasini toping.
$A)[-1;3]$ $B)(-\infty;0)\cup(2;\infty)$
$C)(-\infty;-1]\cup[3;\infty)$ $D)[-1;0)\cup(2;3]$

73. $y=(1+ctg^2x)sin^2x+\frac{2sin2x}{cosx}$ funksiyaning qiymatlar sohasini toping.
$A)[-1;3]$ $B)[-1;1)\cup(1;3]$
$C)[-3;5]$ $D(-3;1)\cup(1;5)$

74. $y=\frac{sinx(ctgx+1)+cosx(tgx+1)}{2}$ funksiyaning qiymatlari sohasini toping.
$A)[-\sqrt{2};\sqrt{2}]$
$B)[-\sqrt{2};-1)\cup(-1;0)\cup(0;1)\cup(1;\sqrt{2})$
$C)[-\sqrt{2};0)\cup(0;\sqrt{2})$
$D)[-\sqrt{2};-1)\cup(-1;1)\cup(1;\sqrt{2}]$

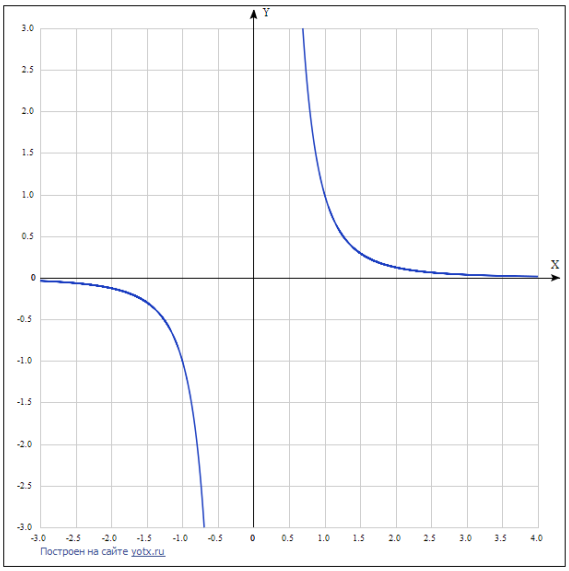
75. $y=\arcsin\left(\left|x-\frac{1}{2}\right|+|x|\right)$ funksiyaning qiymatlari sohasini ko'rsating.
$A)\left[\frac{\pi}{6};\frac{\pi}{2}\right]$ $B)\left[0;\frac{\pi}{2}\right]$ $C)\left[-\frac{\pi}{2};\frac{\pi}{2}\right]$ $D)\left[-\frac{\pi}{2};\frac{\pi}{6}\right]$

76. Chizmada qaysi funksiya grafigi taqriban tasvirlangan?



$A)y = 2^{-x} - 2$ $B)y = 2^{x} - 2$
$C)y = 2^{x-1,5}$ $D)y = 2^{x} - 3$

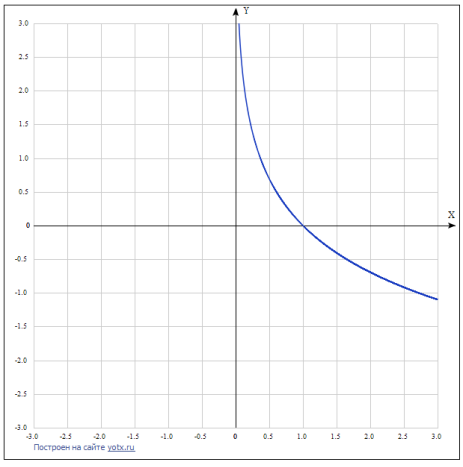
77. Chizmada qaysi funksiya grafigi taqriban tasvirlangan?



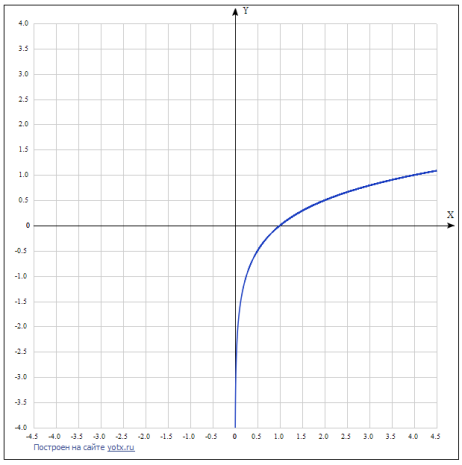
$A)y = x^{-4}$ $B)y = x^{-3}$ $C)y = x^{3}$ $D)y = x^{-2}$

78. Qaysi chizmada $y = log_4 x$ funksiya grafigi taqriban tasvirlangan?

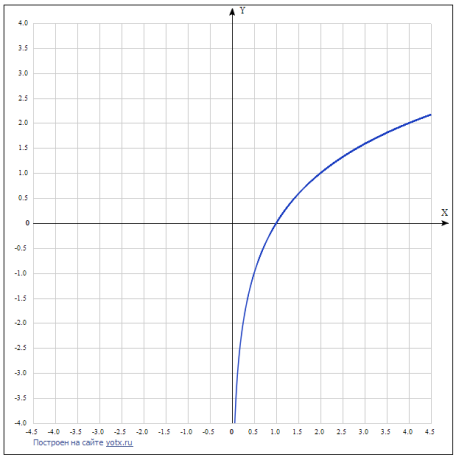
$A)$



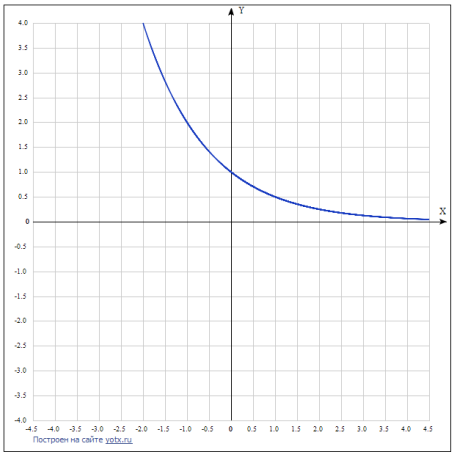
$B)$



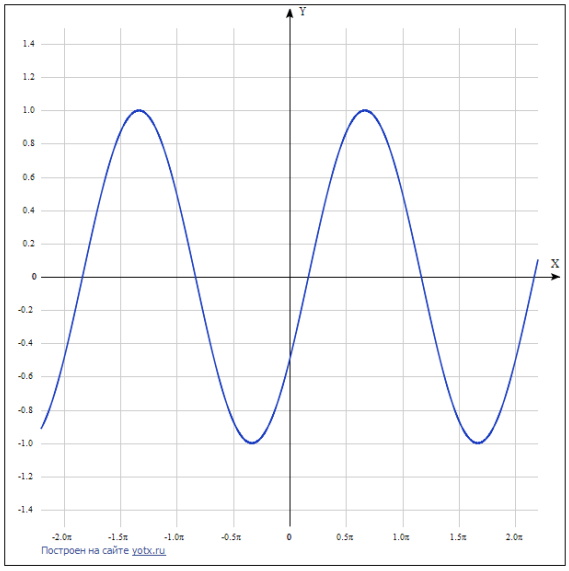
$C)$



$D)$

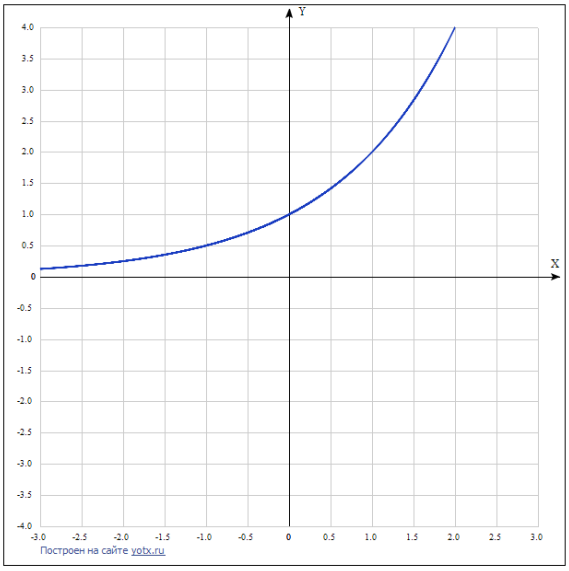


79. Chizmada qaysi funksiya grafigi taqriban tasvirlangan?



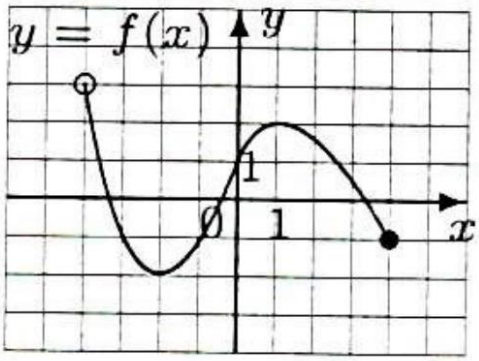
$A)y = \sin\left(x + \frac{\pi}{6}\right)$ $B)y = \sin\left(x + \frac{\pi}{3}\right)$
$C)y = \sin\left(x - \frac{\pi}{6}\right)$ $D)y = sinx$

80. Grafik ko'rinishda berilgan funksiyani toping.



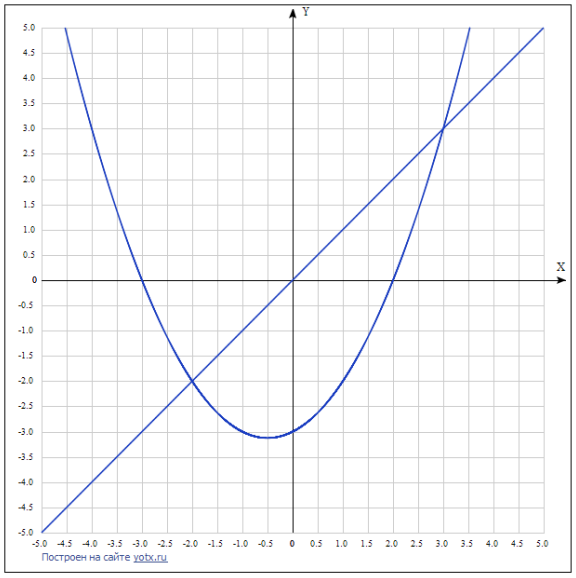
$A)y = e^x$ $B)y = log_2 x$
$C)y = \left(\frac{1}{2}\right)^x$ $D)y = 2^x$

81. Grafik ko'rinishda berilgan funksiya qiymatlar to'plamini toping.



$A)(-2;2)$ $B[-2;3)$ $C)[-2;2]$ $D(-4;4]$

82. Chizmada $[-5;4]$ kesmada berilgan $y = g(x)$ funksiyaning grafigi tasvirlangan. $g(x) \geq x$ tengsizlikni qanoatlantiradigan x ning barcha qiymatlarini toping.



$A)[-4;-2] \cup [3;4]$ $B)[-5;-2] \cup [3;4]$
$C)[-5;-3] \cup [2;4]$ $D)[-2;3]$

83. Agar $f(x) = \frac{e^x}{lnx} + \sqrt{lg2}$ bo'lsa, $f'(e) = ?$

$A)\frac{e^{e-1} \cdot (e-1)}{e}$ $B)e$ $C)e^e$ $D)e^{e-1} \cdot (e-1)$

84. $y = e^x - x - 1$ funksiyaning o'sish oralig'ini toping.

$A)[0;\infty)$ $B)(0;1)$ $C)[1;\infty)$ $D)[e;\infty)$

85. Agar $f(x) = 4 + 3tg^2 2x$ bo'lsa, $f'(\pi) = ?$

$A)0$ $B)2$ $C)3$ $D)1$

86. $y = 4x^5 - 15x^4 - 3$ funksiyaning $(-1;1)$ oraliqdagi eng katta qiymatini toping.

$A) -1$ $B) -3$ $C) -2$ $D) -115$

87. $\int_{\frac{\pi}{6}}^{\frac{\pi}{3}} \frac{sin^3 x + 1}{sin^2 x} dx$ integralni hisoblang.

$A)\frac{7\sqrt{3}-3}{3}$ $B)\frac{7\sqrt{3}+3}{6}$ $C)\frac{7\sqrt{3}+3}{3}$ $D)\frac{7\sqrt{3}-3}{6}$

88. $\int_{-5}^{3} |x-1| dx$ aniq integralning qiymatini hisoblang.

$A) -4{,}5$ $B)20$ $C)16$ $D)18$

89. a ning qanday qiymatlarida $\int_3^a (3x-1)dx = 4$ tenglik o'rinli bo'ladi?

$A)\frac{1 \pm 2\sqrt{22}}{3}$ $B) \pm 3$ $C) \pm 5$ $D)\frac{2 \pm \sqrt{22}}{3}$

90. $f(x) = A \cdot 2^x + B$ funksiya uchun $f'(1) = (ln2)^2$ va $\int_0^2 f(x)dx = \frac{1}{2}$ tengliklar o'rinli bo'lsa, B ni toping.

$A) -0{,}5 \quad B) ln2 \quad C) -1 \quad D) -2$

Testlar yozilishi davomida yo'l qo'yilgan xato va kamchiliklar bo'lsa, bizga ma'lum qiling. Sizning e'tiboringiz ishning sifatini belgilaydi. @alphraganusbot