

Innovasion o'qitishga qo'yiladigan zamonaviy talablar. Matematika o'qituvchisini zamonaviy texnologiyani o'qitishdagi innovasion pedagogik xizmati

Uzluksiz ta'limda matematikani o'qitishning zamonaviy texnologiyalarini o'qitishning uzluksizligini ta'minlashga qaratilgan innovasiyalar

Matematika ta'limida dasturiy va dasturiy bo'lmagan ta'lim texnologiyalari

Matematikani o'rgatishning zamonaviy pedagogik texnologiyalari

Matematikani o'qitishda interaktiv metodlar

Matematikani o'qitishda interaktiv ta'lim

Matematikani o'qitishning zamonaviy information-kommunikatsion texnologiyalari

Matematikani o'qitishda multimediali ta'limdan foydalanish metodikasi

Matematikani o'qitishda zamonaviy matematik paket dasturlardan foydalanish usullari

Matematikani o'qitishda masofadan o'qitish usullari. Zamonaviy ta'limda modulli-kredit texnologiya

Integralni hisoblang. $\iint_{(D)} (x^2 + y^2) dx dy$, bunda (D) -tomonlari

$$y = x, y = x + a, y = a, y = 3a (a > 0) \quad \text{parallelogrammdan iborat.}$$

Differentsial tenglamani yeching. $y'' - 4y' + 8y = e^x (-\sin x + 2\cos x)$.

Berilgan sohaning obrazini toping. $D = \{x > 0, y > 0\}$, $w = \frac{z-i}{z+i}$

Oblastning shizmasini shizing. $|z| > 1 - \operatorname{Re} z$

Differentsial tenglamani yeching. $yy'' + y'^2 = 0$

Integralni hisoblang. $\iint_{(D)} xy dx dy$, bunda (D) - $\sqrt{x} + \sqrt{y} = 1$ parabola va koordinata

o'qlaridan iborat.

Berilgan sohaning obrazini toping. $D = \{1 < |z| < 2\}$, $w = \frac{2}{z-1}$

Oblastning shizmasini shizing. $2|z| > |1 + z^2|$

Differentsial tenglamani yeching. $y'' + 2y' = 4e^x (\sin x + \cos x)$.

Integralni hisoblang. $\iint_{(D)} \sin \sqrt{x^2 + y^2} dx dy$, $(D) = \{(x, y) \in R^2, \pi^2 \leq x^2 + y^2 \leq 4\pi^2\}$

Berilgan sohaning obrazini toping. $D = \{0 < x < 1\}$, $w = \frac{z-1}{z}$

Oblastning shizmasini shizing. $|1+z| < |1-z|$

Integralni hisoblang. $\iint_{(D)} \frac{(x+y)^2}{x} dx dy$, $(D) = \{(x, y) \in R^2, 1-x \leq y \leq 3-x, \frac{x}{2} \leq y \leq 2x\}$

Differentsial tenglamani yeching. $y'' - 4y' + 4y = -e^{2x} \sin 6x$.

Berilgan sohaning obrazini toping. $D = \{0 < \arg z < \frac{\pi}{4}\}$, $w = \frac{z}{z-1}$

Oblastning shizmasini shizing. $z = e^{-it} + 1$, $0 \leq t \leq 2\pi$

$\iint_{(D)} (x^3 + y^3) dx dy$, $(D) = \{(x, y) \in R^2, x^2 \leq y \leq 3x^2, \frac{1}{x} \leq 2y \leq \frac{3}{x}\}$.

Differentsial tenglamani yeching. $y'' + 2y' = -2e^x (\sin x + \cos x)$.

Berilgan sohaning obrazini toping. $D = \{|z| < 1, \operatorname{Im} z > 0\}$, $w = \frac{2z-i}{2+iz}$

Funkciyalar grafiklari bilan chegaralangan figurani berilgan koordinatalar oqi atrofida aylantirishdan hosil bolgan jism hajmini hisoblang
 $y^2 = (x-1)^3$, $x = 2$ (Ox)