

1-Variant

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52. n-tartipli turaqli koeffitsentli sızıqlı differentsial teńlemeler hám olardı sheshiw

1. Differentsial teńlemeni sheshiń. $y'' = \sin x - x$, $y(0) = -1$, $y'(0) = 1$

2. Integraldi esaplan. $\int_{AB} (4\sqrt[3]{x} - 3\sqrt{y}) ds$, bunda AB -tegisliktiń $A(-1;0), B(0;1)$ noqatlarin birlestiriwshi tuwri sızıq.

3. Differentsial teńlemeni sheshiń. $y'' - 4y' + 8y = e^x (-\sin x + 2\cos x)$.

4. Differentsial teńlemeni sheshiń. $y''' = 60x^2$

5. $y = 1 - \ln \cos x$ ($0 \leq x \leq \pi/4$) doǵa uzınlıǵın tabıń.

6. Differentsial teńlemeni sheshiń. $y'' + 2y' = 4e^x (\sin x + \cos x)$.

7. Differentsial teńlemeni sheshiń. $y'' = \cos x$

8. Integraldi esaplan. $\int_{AB} \frac{x}{y} ds$, bunda AB - $y^2 = 2x$ parabolaniń $A(1;\sqrt{2}), B(2;2)$ noqatlar arasındaǵı bo'legi.

9. Differentsial teńlemeni sheshiń. $y'' - 4y' + 4y = -e^{2x} \sin 6x$.

10. Differentsial teńlemeni sheshiń. $y'' = 1 - x^2$

11. $y^2 = x^3$, $0 \leq x \leq 5$ doǵa uzınlıǵın tabıń

12. Differentsial teńlemeni sheshiń. $y'' + 2y' = -2e^x (\sin x + \cos x)$.

13. Differentsial teńlemeni sheshiń. $y'' = \sin x - 1$, $y(0) = -1$, $y'(0) = 1$

14. Integraldi esaplan. $\int_{AB} xy ds$, bunda AB - $|x| + |y| = 1$ teńleme menen berilgen sızıq.

15. Differentsial teńlemeni sheshiń. $y'' + y = 2\cos 7x + 3\sin 7x$.

16. Differentsial teńlemeni sheshiń. $yy'' + y'^2 = 0$

17. Integraldi esaplan. $\int_{AB} xy ds$, bunda AB - $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ ellips

18. Differentsial teńlemeni sheshiń. $y'' + 2y' + 5y = -\sin 2x$.

19. Differentsial teńlemeni sheshiń. $y'' = -y$

20. $x = \cos^4 t$, $y = \sin^4 t$ ($0 \leq t \leq 2\pi$) doǵa uzınlıǵın tabıń

21. Differentsial teńlemeni sheshiń. $y'' - 4y' + 8y = e^x (5\sin x - 3\cos x)$.

22. Differentsial teńlemeni sheshiń. $yy'' + y'^3 - y'^2 = 0$

23. Integraldi esaplan. $\int_{AB} (x+y)ds$, bunda AB -tegislíktíń $A(0;2), B(2;0)$ noqatlarin birlestirwshi tuwri siziq.

24. Differentsial teńlemeneni sheshiń. $y'' + 2y' = e^x (\sin x + \cos x)$.

25. Differentsial teńlemeneni sheshiń. $y'' = y'^2$

26. Integraldi esaplan. $\int_{AB} (x+y)ds$, bunda AB -tegislíktíń $A(0;2), B(2;0)$ noqatlarin birlestirwshi tuwri siziq.

27. Differentsial teńlemeneni sheshiń. $y'' - 4y' + 4y = e^{2x} \sin 3x$.

28. Differentsial teńlemeneni sheshiń. $y' y''' = 3y'^2$

29. Integraldi esaplan. $\int_{AB} \frac{1}{x+y} ds$, bunda AB - $y = x+2$ tuwri siziqtíń $A(2;4), B(1;3)$ noqatlar arasındaǵı bo'legi.

30. Differentsial teńlemeneni sheshiń. $y'' + 6y' + 13y = e^{-3x} \cos 4x$.

31. Differentsial teńlemeneni sheshiń. $x = y'^2 + 1$

32. Integraldi esaplan. $\int_{AB} (x^{4/3} + y^{4/3}) ds$, bunda AB - $x^{2/3} + y^{2/3} = 1$ teńleme menen berilgen iymek siziq.

33. Differentsial teńlemeneni sheshiń. $y'' + y = 2 \cos 3x - 3 \sin 3x$.

34. Differentsial teńlemeneni sheshiń. $y''' = \sqrt{1 + (y'')^2}$

35. Integraldi esaplan. $\int_{AB} (4\sqrt[3]{x} - 3\sqrt{y}) ds$, bunda AB -tegislíktíń $A(-1;0), B(0;1)$ noqatlarin birlestirwshi tuwri siziq.

36. Differentsial teńlemeneni sheshiń. $y'' + 2y' + 5y = -2 \sin x$.

37. Differentsial teńlemeneni sheshiń. $y''' = \sin x + \cos x$

38. İkkinchi tartibli chiziqli bir jinsli tenglamani eching. $y'' + 4y = 0$, $y(\frac{\pi}{2}) = 1$, $y'(\frac{\pi}{2}) = -1$

39. Differentsial teńlemeneni sheshiń. $y'' - 4y' + 8y = e^x (-3 \sin x + 4 \cos x)$.

40. Differentsial teńlemeneni sheshiń. $y''' - 2y'' - x = 0$

41. Integraldi esaplan. $\int_{AB} \frac{1}{y^2} ds$, bunda AB - $y = a \cosh \frac{x}{a}$ teńleme menen berilgen iymek siziq.

42. Differentsial teńlemeneni sheshiń. $y'' + 2y' = 10e^x (\sin x + \cos x)$.

43. Differentsial teńlemenini sheshiń. $y''' = x \ln x$, $y(1) = 1$, $y'(1) = 0$, $y''(1) = -1$

44. Integraldi esaplan. $\int_{AB} (4\sqrt[3]{x} - 3\sqrt{y}) ds$, bunda AB -tegisliskiń $A(-1;0)$, $B(0;1)$ noqatlarin birlestiriwshi tuwri siziq.

45. Differentsial teńlemenini sheshiń. $y'' - 4y' + 4y = e^{2x} \sin 5x$.

46. Differentsial teńlemenini sheshiń. $y''' = xe^x$, $y(0) = y'(0) = y''(0) = 0$

47. Integraldi esaplan. $\int_{AB} \frac{1}{y^2} ds$, bunda $AB - y = ach \frac{x}{a}$ teńleme menen berilgen iymek siziq.

48. Differentsial teńlemenini sheshiń. $y'' + y = 2 \cos 5x + 3 \sin 5x$.

49. Differentsial teńlemenini sheshiń. $y^{IV} = x$

50. Integraldi esaplan. $\int_{AB} \frac{1}{y^2} ds$, bunda $AB - y = ach \frac{x}{a}$ teńleme menen berilgen iymek siziq.

51. Differentsial teńlemenini sheshiń. $y'' + 2y' + 5y = -17 \sin 2x$.

52. Differentsial teńlemenini sheshiń. $y'' + y'^2 = 2e^{-y}$

53. Integraldi esaplan. $\int_{AB} (4\sqrt[3]{x} - 3\sqrt{y}) ds$, bunda AB -tegisliskiń $A(-1;0)$, $B(0;1)$ noqatlarin birlestiriwshi tuwri siziq.

54. Differentsial teńlemenini sheshiń. $y'' + 6y' + 13y = e^{-3x} \cos x$.

55. Differentsial teńlemenini sheshiń. $y'' = \ln x$

56. Integraldi esaplan. $\int_{AB} (x^2 + y^2) ds$, bunda $AB - \begin{cases} x = a(\cos t + t \sin t) \\ y = a(\sin t - t \cos t) \end{cases}, 0 \leq t \leq 2\pi$ teńleme menen berilgen iymek siziq.

57. Differentsial teńlemenini sheshiń. $y'' - 4y' + 8y = e^x (3 \sin x + 5 \cos x)$.

58. Differentsial teńlemenini sheshiń. $y'' = \frac{1}{x}$

59. Integraldi esaplan. $\int_{AB} (x^2 + y^2) ds$, bunda $AB - \begin{cases} x = a(\cos t + t \sin t) \\ y = a(\sin t - t \cos t) \end{cases}, 0 \leq t \leq 2\pi$ teńleme menen berilgen iymek siziq.

60. Differentsial teńlemenini sheshiń. $y'' + 2y' = 6e^x (\sin x + \cos x)$.

61. Differentsial teńlemenini sheshiń. $y'' = \cos 2x$

62. Integraldi esaplan. $\int_{AB} (x^2 + y^2) ds$, bunda $AB - \begin{cases} x = a(\cos t + t \sin t) \\ y = a(\sin t - t \cos t) \end{cases}, 0 \leq t \leq 2\pi$ teńleme menen berilgen iymek siziq.

63. Differentsial teńlemenini sheshiń. $y'' - 4y' + 4y = -e^{2x} \sin 4x$.

64. Differentsial teńlemenini sheshiń. $y''' = xe^x$, $y(0) = y'(0) = y''(0) = 0$

65. Integraldi esaplan. $\int_{AB} (x+y)ds$, bunda $AB - \rho = a\sqrt{\cos 2\varphi}$, $-\pi/4 \leq \varphi \leq \pi/4$ teńleme menen berilgen iymek siziq.

66. Differentsial teńlemenini sheshiń. $y'' + 6y' + 13y = -e^{3x} \cos 5x$.

67. Differentsial teńlemenini sheshiń. $x = y''^2 + 1$

68. Integraldi esaplan. $\int_{AB} x^2 ds$, bunda $AB - x^2 + y^2 = 1$ teńleme menen berilgen sheńber

69. Differentsial teńlemenini sheshiń. $y'' + y = 2\cos 7x - 3\sin 7x$.

70. Differentsial teńlemenini sheshiń. $y'' = \frac{1}{x}$

71. Integraldi esaplan. $\int_{AB} x^2 ds$, bunda $AB - x^2 + y^2 = 1$ teńleme menen berilgen sheńber

72. Differentsial teńlemenini sheshiń. $y'' + 2y' + 5y = -\cos x$.

73. Differentsial teńlemenini sheshiń. $y' y''' = 3y''^2$

74. Integraldi esaplan. $\int_{AB} \frac{1}{y^2} ds$, bunda $AB - y = ach \frac{x}{a}$ teńleme menen berilgen iymek siziq.

75. Differentsial teńlemenini sheshiń. $y'' - 4y' + 8y = e^x (2\sin x - \cos x)$.

76. Differentsial teńlemenini sheshiń. $y'' = \cos 2x$

77. Integraldi esaplan. $\int_{AB} (x+y)ds$, bunda $AB - \rho = a\sqrt{\cos 2\varphi}$, $-\pi/4 \leq \varphi \leq \pi/4$ teńleme menen berilgen iymek siziq.

78. Differentsial teńlemenini sheshiń. $y'' + 2y' = 3e^x (\sin x + \cos x)$.

79. Differentsial teńlemenini sheshiń. $y''' = \sin x + \cos x$

80. Integraldi esaplan. $\int_{AB} x^2 ds$, bunda $AB - x^2 + y^2 = 1$ teńleme menen berilgen sheńber

81. Differentsial teńlemenini sheshiń. $y'' - 4y' + 4y = e^{2x} \sin 4x$.

82. Differentsial teńlemenini sheshiń. $yy'' + y'^3 - y'^2 = 0$

83. Integraldi esaplan. $\int_{AB} x^2 ds$, bunda $AB - x^2 + y^2 = 1$ teńleme menen berilgen sheńber

84. Differentsial teńlemenini sheshiń. $y'' + 6y' + 13y = e^{-3x} \cos 8x$.

85. Differentsial teńlemenini sheshiń. $y'' = \sin x - x$, $y(0) = -1$, $y'(0) = 1$

86. Integraldi esaplan. $\int_{AB} \frac{1}{y^2} ds$, bunda $AB - y = ach \frac{x}{a}$ teńleme menen berilgen iymek siziq.

87. Differentsial teńlemenini sheshiń. $y'' + 2y' + 5y = 10 \cos x$.

88. Differentsial teńlemenini sheshiń. $y'' + y'^2 = 2e^{-y}$

89. Integraldi esaplan. $\int_{AB} (x + y) ds$, bunda $AB - \rho = a\sqrt{\cos 2\varphi}$, $-\pi/4 \leq \varphi \leq \pi/4$ teńleme menen berilgen iymek siziq.

90. Differentsial teńlemenini sheshiń. $y'' + y = 2 \cos 4x + 3 \sin 4x$.

91. Differentsial teńlemenini sheshiń. $yy'' + y'^3 - y'^2 = 0$

92. Integraldi esaplan. $\int_{AB} (x + y) ds$, bunda $AB - \rho = a\sqrt{\cos 2\varphi}$, $-\pi/4 \leq \varphi \leq \pi/4$ teńleme menen berilgen iymek siziq.

93. Differentsial teńlemenini sheshiń. $y'' + 2y' = e^x (\sin x + \cos x)$.

94. Differentsial teńlemenini sheshiń. $y'' = y'^2$

95. Integraldi esaplan. $\int_{AB} x^2 ds$, bunda $AB - x^2 + y^2 = 1$ teńleme menen berilgen sheńber

96. Differentsial teńlemenini sheshiń. $y'' - 4y' + 4y = e^{2x} \sin 3x$.

97. Differentsial teńlemenini sheshiń. $y' y''' = 3y''^2$

98. Integraldi esaplan. $\int_{AB} x^2 ds$, bunda $AB - x^2 + y^2 = 1$ teńleme menen berilgen sheńber

99. Differentsial teńlemenini sheshiń. $y'' + 6y' + 13y = e^{-3x} \cos 4x$.

100. Differentsial teńlemenini sheshiń. $x = y''^2 + 1$

101. Integraldi esaplan. $\int_{AB} x^2 ds$, bunda $AB - x^2 + y^2 = 1$ teńleme menen berilgen sheńber

102. Differentsial teńlemenini sheshiń. $y'' + y = 2 \cos 3x - 3 \sin 3x$.