

Определить тип уравнений. Привести к каноническому виду.

1.  $u_{xx} + 4u_{xy} + u_{yy} + u_x + u_y - x^2y = 0.$

2.  $u_{xx} + 2u_{xy} + 5u_{yy} - 32u_y = 0.$

3.  $u_{xx} - 2u_{xy} + u_{yy} + 9u_x + 9u_y = 0.$

4.  $2u_{xx} + 3u_{xy} + u_{yy} + 7u_x + 4u_y = 0.$

5.  $u_{xx} + u_{xy} - 2u_{yy} - 3u_x - 15u_y + 27x = 0.$

6.  $9u_{xx} - 6u_{xy} + u_{yy} + 10u_x - 15u_y + x - 2y = 0.$

7.  $u_{xx} + 2u_{xy} + 10u_{yy} - 24u_x + 42u_y + 2(x + y) = 0.$

8.  $u_{xx} + 4u_{xy} + 13u_{yy} + 3u_x + 24u_y + 9(x + y) = 0.$

9.  $u_{xx} - 4u_{xy} + 5u_{yy} - 3u_x + u_y = 0.$

10.  $u_{xx} - 6u_{xy} + 9u_{yy} - u_x + 2u_y = 0.$

11.  $2u_{xy} - 4u_{yy} + u_x - 2u_y + x = 0.$

12.  $u_{xy} + 2u_{yy} - u_x + 4u_y = 0.$

13.  $2u_{xx} + 2u_{xy} + u_{yy} + 4u_x + 4u_y = 0.$

14.  $u_{xx} + 2u_{xy} + u_{yy} + 3u_x - 5u_y = 0.$

15.  $u_{xx} - u_{yy} + u_x + u_y = 0.$

16.  $u_{xx} + u_{xy} - u_y + 4x = 0.$

17.  $3u_{xx} + u_{xy} + 3u_x + u_y + y = 0.$
18.  $u_{xx} + 4u_{xy} + 5u_{yy} - 2u_x - 2u_y = 0.$
19.  $5u_{xx} + 16u_{xy} + 16u_{yy} + 24u_x + 32u_y = 0.$
20.  $u_{xx} - 2u_{xy} + u_{yy} - 3u_x + 12u_y = 0.$
21.  $2u_{xx} - 5u_{xy} + 3u_{yy} - u_x + u_y + 2x = 0.$
22.  $2u_{xx} + 6u_{xy} + 4u_{yy} + u_x + u_y = 0.$
23.  $3u_{xx} - 10u_{xy} + 3u_{yy} - 2u_x + 4u_y + 2y = 0.$
24.  $3u_{xx} + 10u_{xy} + 3u_{yy} + u_x + u_y + 2x + y = 0.$
25.  $u_{yy} - 2u_{xy} + 2u_x - u_y - 4e^x = 0.$