**Задание 1. Привести уравнение к каноническому виду в каждой из областей, где его тип сохраняется.**

1. $u\_{xx}+xu\_{yy}-y^{3}u\_{x}=0$
2. $u\_{xx}+yu\_{yy}-x^{3}u\_{y}=0$
3. $u\_{xx}+yu\_{yy}+\frac{1}{2}u\_{y}=0$
4. $yu\_{xx}+xu\_{yy}+y^{2}u\_{x}=0$
5. $xu\_{xx}+yu\_{yy}-x^{2}u\_{x}+x^{2}u\_{y}=0$
6. $u\_{xx}+xyu\_{yy}+x^{2}u\_{x}=0$
7. $yu\_{xx}-x^{2}u\_{yy}+xu\_{x}+xu\_{y}=0$
8. $y^{2}u\_{xx}-xu\_{yy}+yu\_{x}=0$
9. $x^{2}u\_{xx}-y^{2}u\_{yy}+xu\_{x}=0$
10. $x^{2}u\_{xx}+y^{2}u\_{yy}-xyu\_{x}=0$
11. $y^{2}u\_{xx}+x^{2}u\_{yy}+xyu\_{y}=0$
12. $y^{2}u\_{xx}+2xyu\_{xy}+x^{2}u\_{yy}=0$
13. $x^{2}u\_{xx}+2xyu\_{xy}+y^{2}u\_{yy}=0$
14. $4yu\_{xx}-e^{2x}u\_{yy}-4y^{2}u\_{x}=0$
15. $u\_{xx}+2u\_{xy}+(1+y)u\_{yy}=0$
16. $yu\_{xx}-xu\_{yy}+u\_{x}+yu\_{y}=0$
17. $u\_{xx}+6\sqrt{x}u\_{xy}-4xu\_{yy}+2u\_{x}+3u\_{y}=0$
18. $4xu\_{xx}-e^{2x}u\_{yy}-4x^{2}u\_{x}=0$
19. $u\_{xx}+2u\_{xy}+(1+xy)u\_{yy}=0$
20. $u\_{xx}+2u\_{xy}+\left(1+x\right)u\_{yy}=0$
21. $u\_{xx}+2\sqrt{x}u\_{xy}+(y+x)u\_{yy}=0$
22. $u\_{xx}+2\sqrt{y}u\_{xy}+(y+x)u\_{yy}=0$
23. $xu\_{xx}+2\sqrt{xy}u\_{xy}+(y+5)u\_{yy}=0$
24. $yu\_{xx}+2\sqrt{xy}u\_{xy}+(x+16)u\_{yy}=0$
25. $xyu\_{xx}+2x\sqrt{y}u\_{xy}+(x+1)u\_{yy}=0$