

1

$$\alpha = 1$$

2

$$\begin{pmatrix} e/4 & -3e/4 \\ -3e/4 & e/4 \end{pmatrix}$$

3

$$2x - \sqrt{3}y + 1 = 0$$

4

$$-\frac{2}{3}$$

5

$$y + \frac{2x}{x^2 + z^2} + \sin(1 + x^2 - y^2) +$$
$$-2y^2 \cos(1 + x^2 - y^2) - \frac{2z}{(x^2 + z^2)^2}$$