

SOLUTIONS FOR MIDTERM 2

ALEXEI OBLOMKOV

Problem 1. A)

$$\begin{pmatrix} 2 & -3 \\ -1 & 2 \end{pmatrix}$$

B) π

Problem 2.

$$\int_{-1}^1 \int_{|x|}^1 \int_{-\sqrt{z^2-x^2}}^{\sqrt{z^2-x^2}} f(x, y, z) dy dz dx,$$
$$\int_0^1 \int_{-z}^z \int_{-\sqrt{z^2-y^2}}^{\sqrt{z^2-x^2}} f(x, y, z) dx dy dz.$$

Problem 3. $\frac{16\pi}{3}$

Problem 4. $6/5$