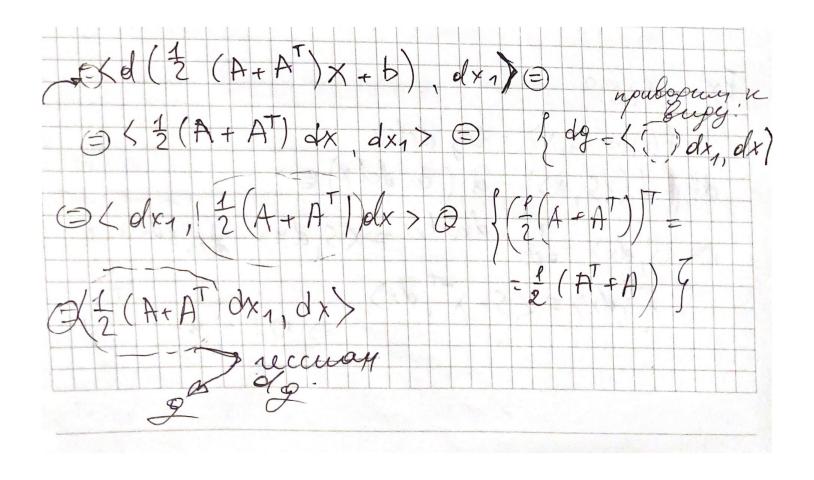
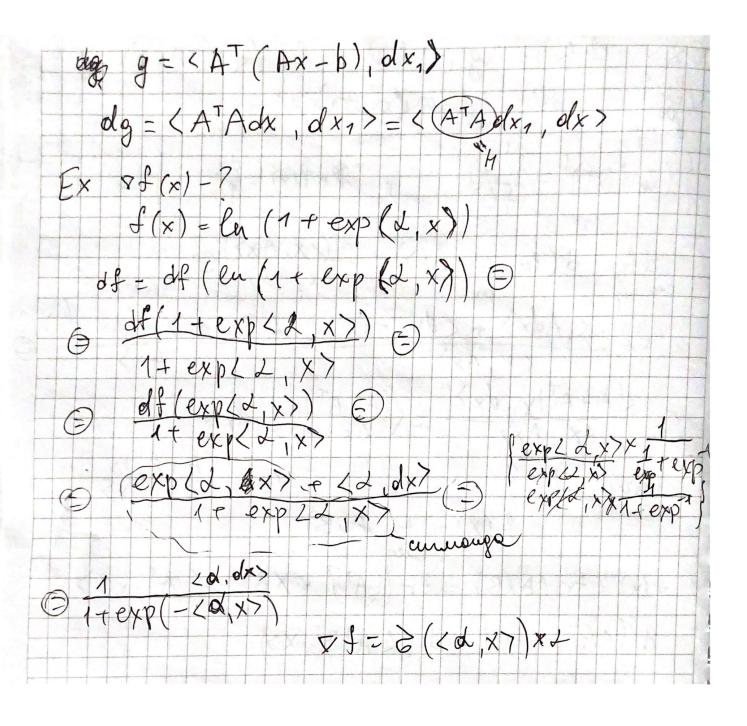
$E \times 2$: $\nabla f(x)$? $\frac{1}{2} \times A \times + b \times + c$ f(x) = 1 (x, Ax7 + 6, x7 + c # = d (12 < x, Ax) + (8, x) + c) = 2 d(x, Ax) + d(28, x) = 2 d(x, Ax) + d(28, x) = 2 d(x, Ax) + = 1(Ax, dx)+(x, Adx)= Elle who) = 1 (<Ax, dx>+<ATx, dx>) 12 No cb-by cuempnoso hpery-g:

(a, dx) + (b, dx) - (a+b, dx) df = (1 Ax + 2 ATx+6, dx) $df = \langle \frac{1}{2}(A + A^{T})x + \theta, dx \rangle$ $dg = o(\langle \frac{1}{2}(A + A^{T})x + \theta, dx_{1} \rangle) =$





1) den P(x) - def (x) of (x, Ax) = d(x, Ax)change (x, Ax) = d(x, Ax) (x, Ax) (x, Ax) (x, Ax) (x, Ax) (x, Ax)= < (A+AT)X (dx) $\nabla f = \frac{(A + A^T)_X}{\langle X + A_X \rangle}$ Caradient -? f(x) = tr(A + B) f(x) = tr(A + B) f(x) = tr(A + B)d (<AT, XB7 = d (<ATBT, X>)

