b/ Write the sun, I matrix product

-1 & px Mxy py + & Jx px

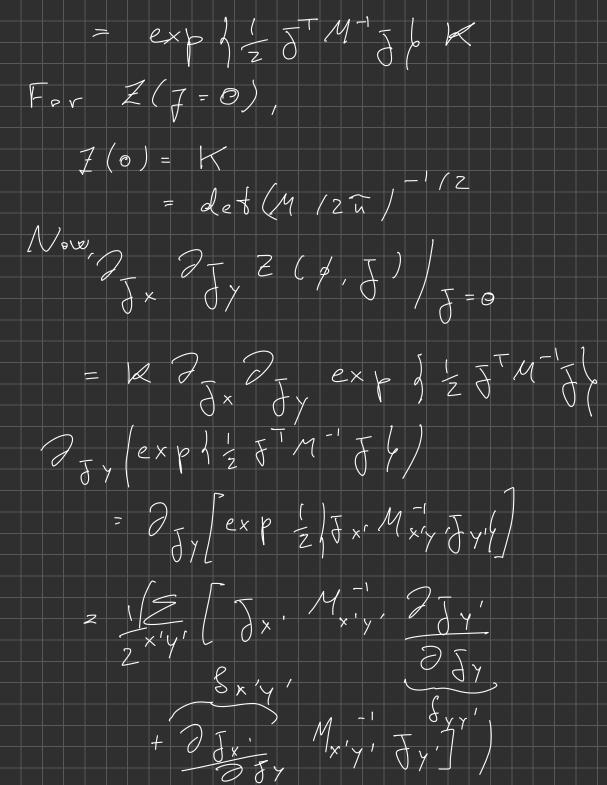
2 xy px xy py + x Jx px = - 1 3 1 1 2 + 3 7 2 NOIE: where J. J I've absorbed factors are verbors w/ of a Das, a M -> J components' M 15 Invertible 50

\$\overline{\Pi} = \gamma + M^{-1} \overline{\Pi} = M^{-1} + 3 7 4 + 3 7 1 7

 $= -1 \int y^{T} M y + y^{T} \delta^{-1} \delta^{-1}$ = - [[y T M y -] T M - 1] So now the formula for integral $Z = \int \frac{\partial}{\partial x} dx \cdot dx \cdot exp \cdot d - \frac{\partial}{\partial x} (yTMy)$ $- \frac{\partial}{\partial x} - \frac{\partial}{\partial y} (yTMy)$ e z d M d / s ex p [- a y My]

e z d M d t (M) - 1/2

e z d M d t (M)



= / E = / X' Y' Syy' + Jy, Mx, 1 8 x, 7] Nov, next der vative, 7 Jx & 1 3 x' M = 1 / Syy/ + Jy, Mr, y, 8x, y, J (Remember Shat any terms left w/ 7x, Jyll after derivative verill g, to zero: J=0 at end) = \(\int \begin{aligned} \beg = 2 M x y (Symmetriz and framspose) 21x 21, Z(6, 7)= Mxy-1

$$= \sum_{i=1}^{n} (-i) \frac{1}{2(i)} \frac$$

Gren's function nethod, ed & Gxy Myz = Bxz recall, G (x,y) = G(x-y) RHS (easy b, t), (G(x-2), K(x-2)) $a \leq S_{x, 2} = -iK(x-2) = a$ Convercely meeron, f Myz, ad & Gxym258 yz e : K(x-y) = m2 ad & G(x-7) Sxz e : K(x-2) = m2dG(k)

for terms, u blu edges of Laplacian Stencil $a = \{ x, y = \{ y, y, z \} \}$ $y = x + y + \{ y, y, z \}$ $y = x + y + \{ y, y, z \}$ $e = \{ x, y = \{ y, y = \} \}$ = a 25 [6 (x-y-z) x+zy ikk-y-z) G(x - 7) = a G(x) == alf g(x) e i kx [e i ky = -i kg]

