Subject: Session 33

Year. Month. Date. ( )

1.

(a) $T_t = T_x x_t + T_y y_t$

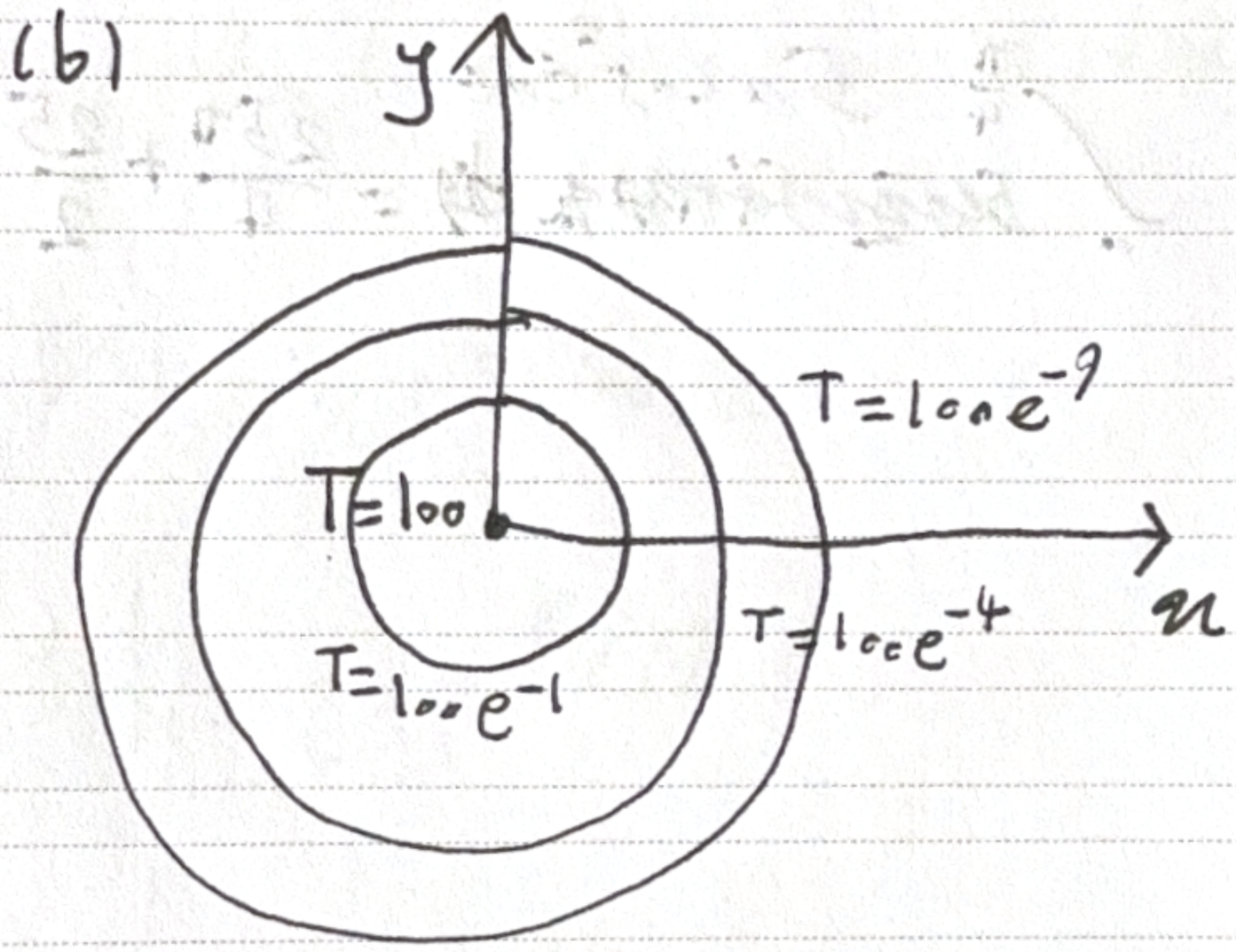
$= 100 e^{-(x^2+y^2)} \cdot (-2x) \cdot x_t$

$+ 100 e^{-(x^2+y^2)} \cdot (-2y) \cdot y_t$

$= 100 e^{-(x^2+y^2)} \cdot (-2x) \cdot (\cos(2t) - 2t \sin(2t))$

$- 100 e^{-(x^2+y^2)} \cdot (-2y) \cdot (\sin 2t + 2t \cos 2t))$

(b)



2.

$w_t = w_x x_t + w_y y_t$

$\Rightarrow w_t|_{(1,1)} = 3 \cdot 2 \cdot t + 1 \cdot 3 \cdot t^2$

$\Rightarrow 9 = 6 + 3$