## 12. HW 3

Continuous Theory

1) 2D Square Elongation (youtube example)

- Calculate F

Delongated square in W

 $\frac{1}{\chi} = \phi(\frac{1}{\chi}) = \begin{bmatrix} 2\chi^{\chi} \\ \chi^{3} \end{bmatrix} \frac{\partial}{\partial \chi^{3}}$ 

D 3 D'Abstract Time-Dependent Motion (rjoutube ex.)

- Calculate F.

2) Assume

 $\phi(\vec{x},t) = \begin{bmatrix} 3\vec{x}^{2}\vec{x}^{3} + t\vec{x}^{2} \\ \vec{x}^{2}\vec{x}^{3} + t\vec{x}^{3} \end{bmatrix}$ 

$$= \begin{bmatrix} 6X^{*}X^{y} & 3\overline{X}^{*} & 3tX^{2} \\ -t & 0 & \lambda X^{2} \\ 0 & 5X^{2} & 5X^{y} \end{bmatrix}$$

- F may not be symmetric. - F is a  $f^n$  of X and t.



