12. HW 3

Continuous Theory

1) 28 Square Clongation (youtube example)

- Calculate F

Delongated square in W

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

 $= \begin{bmatrix} 5 & 0 \\ 5 & 0 \end{bmatrix}$ $= \begin{bmatrix} 5 & 0 \\ 5 & 3 \end{bmatrix}$

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

- Calculate F.

2 Assume

 $\phi(X,+) = \begin{bmatrix} 3X^{2}X^{3} + + X^{2} \\ X^{2}X^{3} + + X^{4} \end{bmatrix}$ $5X^{3}X^{2}$

 $F = \frac{\partial \Phi}{\partial X} = \frac{\partial A}{\partial X$

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

- F may not be symmetric.
- F is a function of I and t.



