

PROJECT ONE: MILESTONE 3B – COVER PAGE

Team Number: Tues-26

Please list full names and MacID's of all *present* Team Members

Full Name:	MacID:
Sophia Workun	workus1
Emilia Pistic	pisice
Ehsaan Khan	khane16
Jackson Lippert	lippertj
Sana Khan	khans288

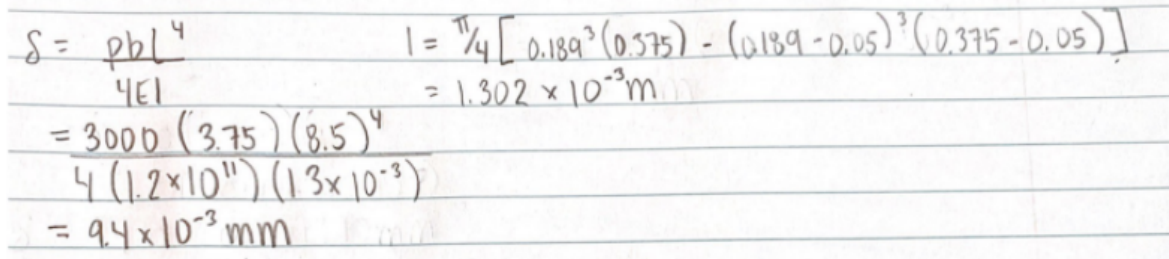
MILESTONE 3B – DESIGN EMBODIMENT

Team Number: **Tues-26**

1. Deflection Estimation (Stage 1)

Estimate deflection δ (mm): **$9.4 \times 10^{-3} \text{ mm}$**

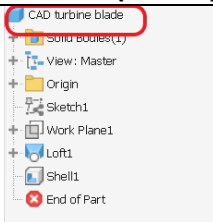
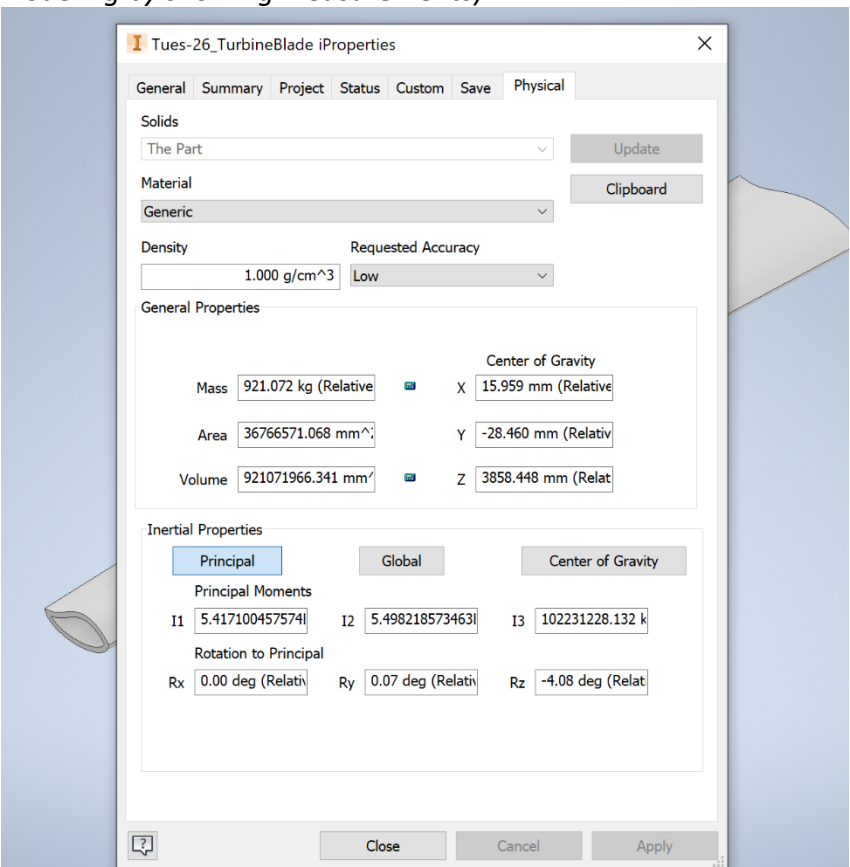
Insert calculation or photo of hand calculation in the space below.

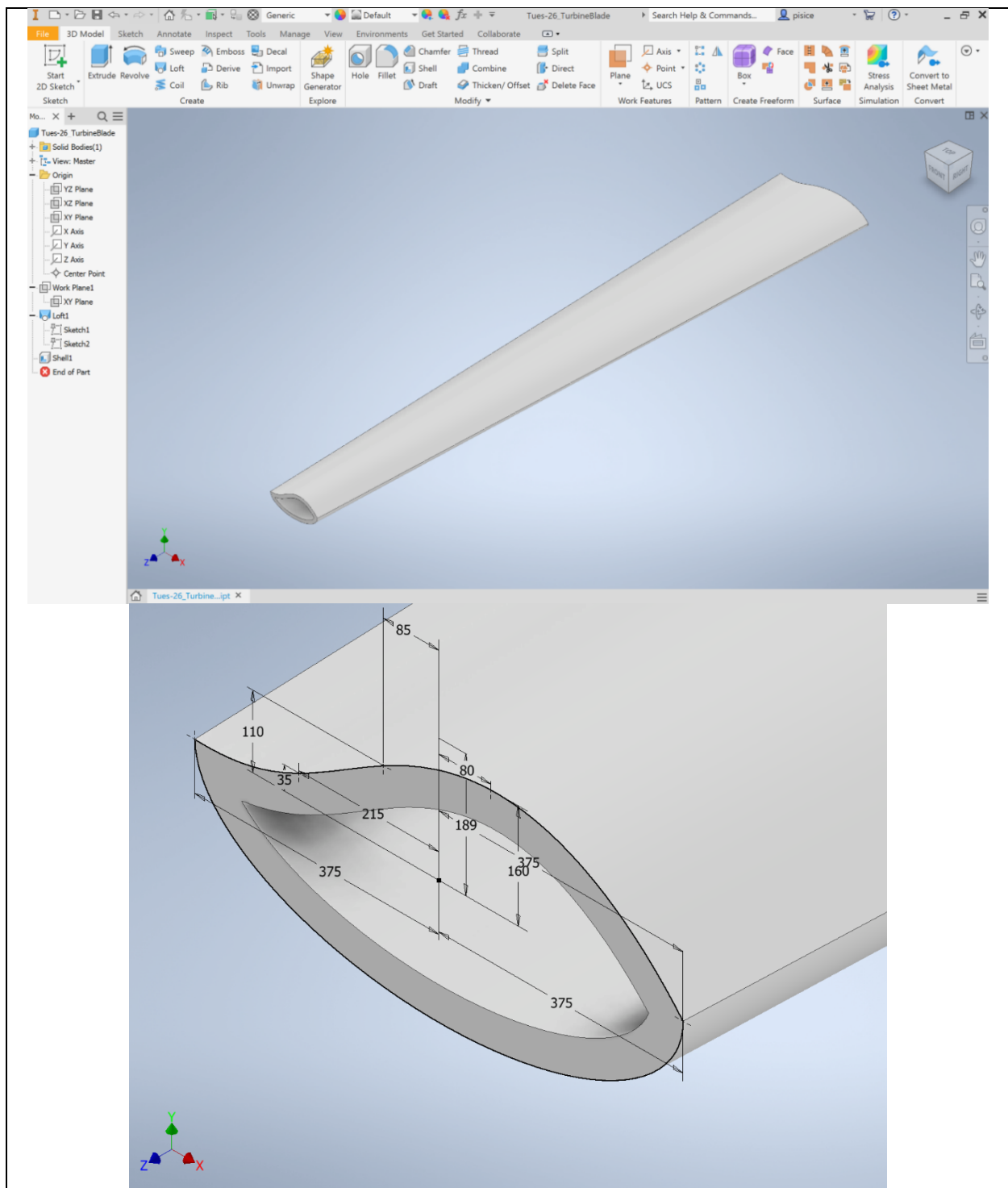


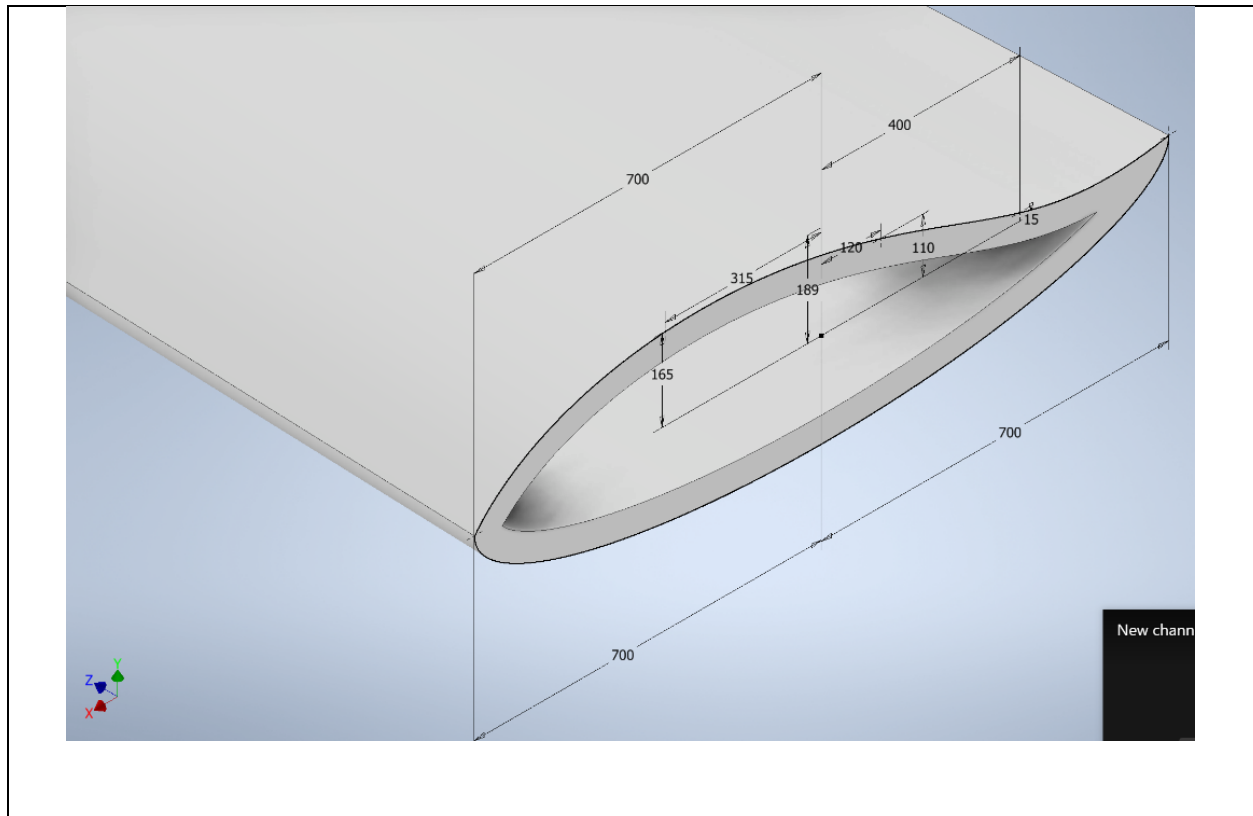
Handwritten calculation for deflection δ :

$$\delta = \frac{pbL^4}{4EI}$$
$$I = \frac{\pi}{4} [0.189^3(0.375) - (0.189 - 0.05)^3(0.375 - 0.05)]$$
$$= 1.302 \times 10^{-3} \text{ m}$$
$$= \frac{3000 (3.75) (8.5)^4}{4 (1.2 \times 10^{11}) (1.3 \times 10^{-3})}$$
$$= 9.4 \times 10^{-3} \text{ mm}$$

2. Solid Model of Turbine Blade (Stage 2)

Volume (mm ³):	
	<p>Steps to find the volume:</p> <ol style="list-style-type: none"> 1. Right-click on 3D part (see picture to the left) 2. Click on “iProperties” 3. Click on the tab called “Physical” 4. Click on “Update” to show the volume
<p><i>Insert screenshots of your team’s solid models in multiple views (please show evidence of accurate CAD modeling by showing measurements).</i></p>	
	





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3. Deflection Simulation (Stage 3)

Simulated deflection δ (mm):	5.503mm
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Insert screenshots of your team's deflection simulation and provide evidence of the simulated deflection.

