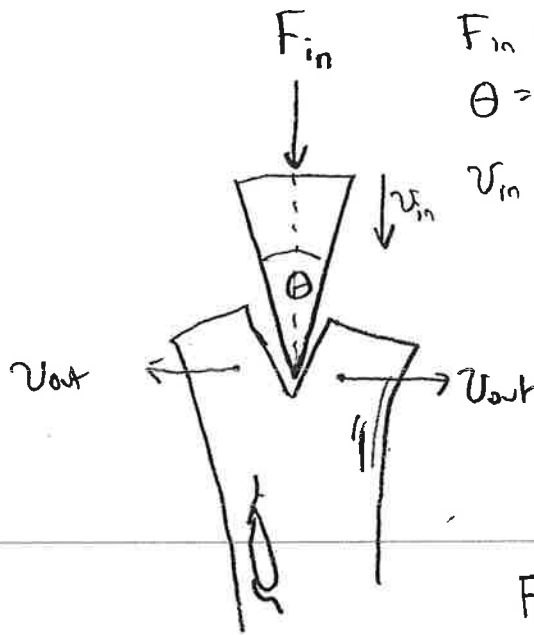


EX 23.9

Splitting logs with a wedge



$$F_{in} = 400 \text{ lbs}$$

$$\theta = 10 \text{ deg}$$

$$v_{in} = 1 \text{ ft/sec}$$

$$v_{out} = v_{in} \tan\left(\frac{\theta}{2}\right)$$

$$= 0.087 \text{ ft/sec}$$

$$F_{out} = F_{in} \frac{v_{in}}{v_{out}}$$

$$F_{out} = 4600 \text{ lbs}$$