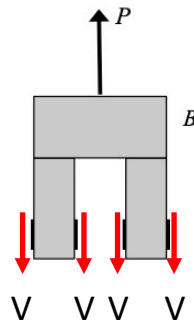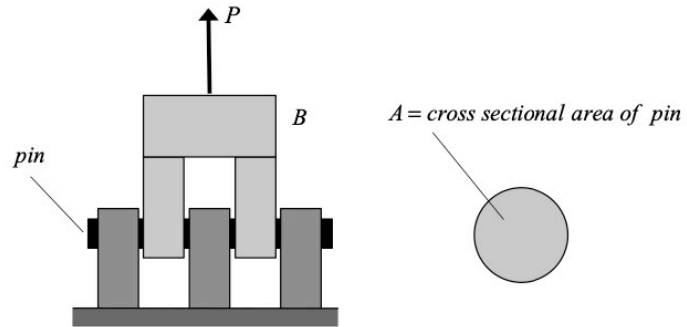## Quiz02 – 9:30 class

Conceptual question 3.1

Consider the hinge shown below that is supported by a single pin whose cross-sectional area is A. A load P is applied to end B of the hinge. What is the maximum shear stress in the pin?

A = cross sectional area of pin

$$\Sigma F = P - 4V = 0 \qquad \Longrightarrow \qquad V = P/4$$

$$\tau_{max} = \frac{V}{A} = \frac{P}{4A}$$