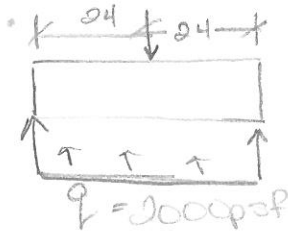
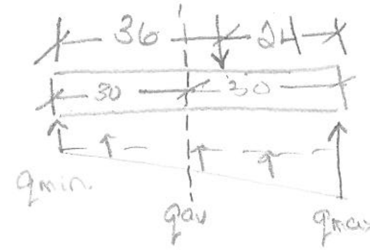
(1)



Δ load = 10,000 lbs

(2)



$q_{av} = 2000$

$q_{min} = 798$ psf

$q_{max} = 3202$ psf

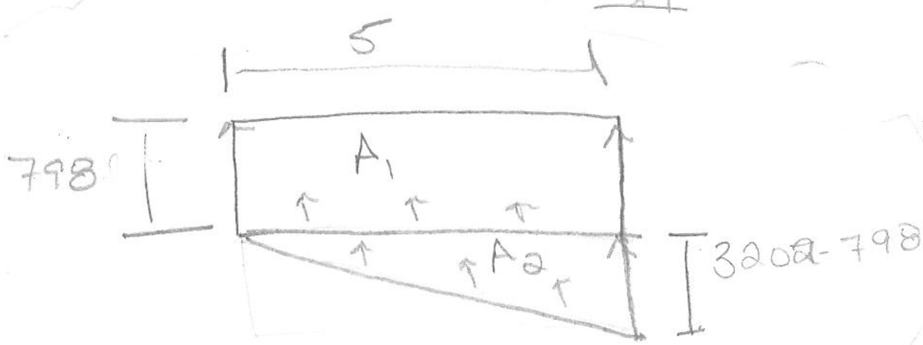
$$\Delta \text{load} = 798 \times 5 + \frac{(3202 - 798)}{2} \times 5$$

$$= 3990 + 6017.5$$

∴ total Area under stress block $\cong$ 10,000 lbs.

stays the same, but is distributed differently

exp



$A_1 = 798 \times 5$

$$A_2 = \frac{(3202 - 798)}{2} \times 5.$$