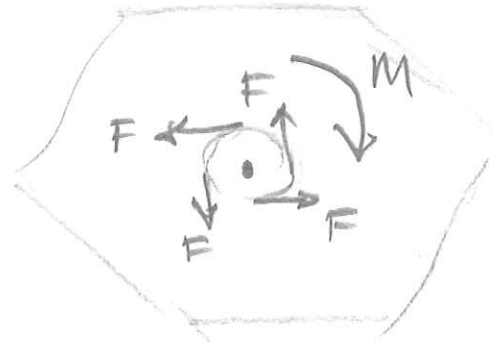
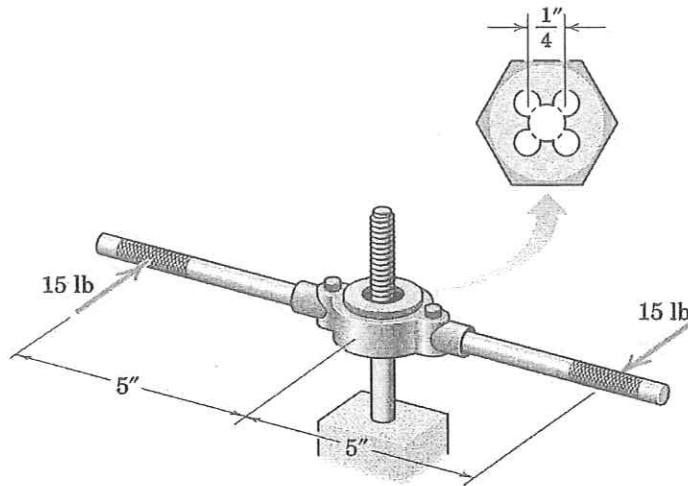


A die is being used to cut threads on a rod. If 15 lb forces are applied as shown, determine the magnitude  $F$  of the 4 equal forces exerted on the  $1/4$  in rod by each of the cutting surfaces so that their external effect on the rod is equivalent to that of the two 15 lb forces.



2 COUPLES DUE  
TO DIE

$$\sum M = 0$$

$$M = 2(F \cdot 1/4)$$

$$(15 \text{ lb})(10") = 2(F)(1/4")$$

$$F = 300 \text{ lb}$$