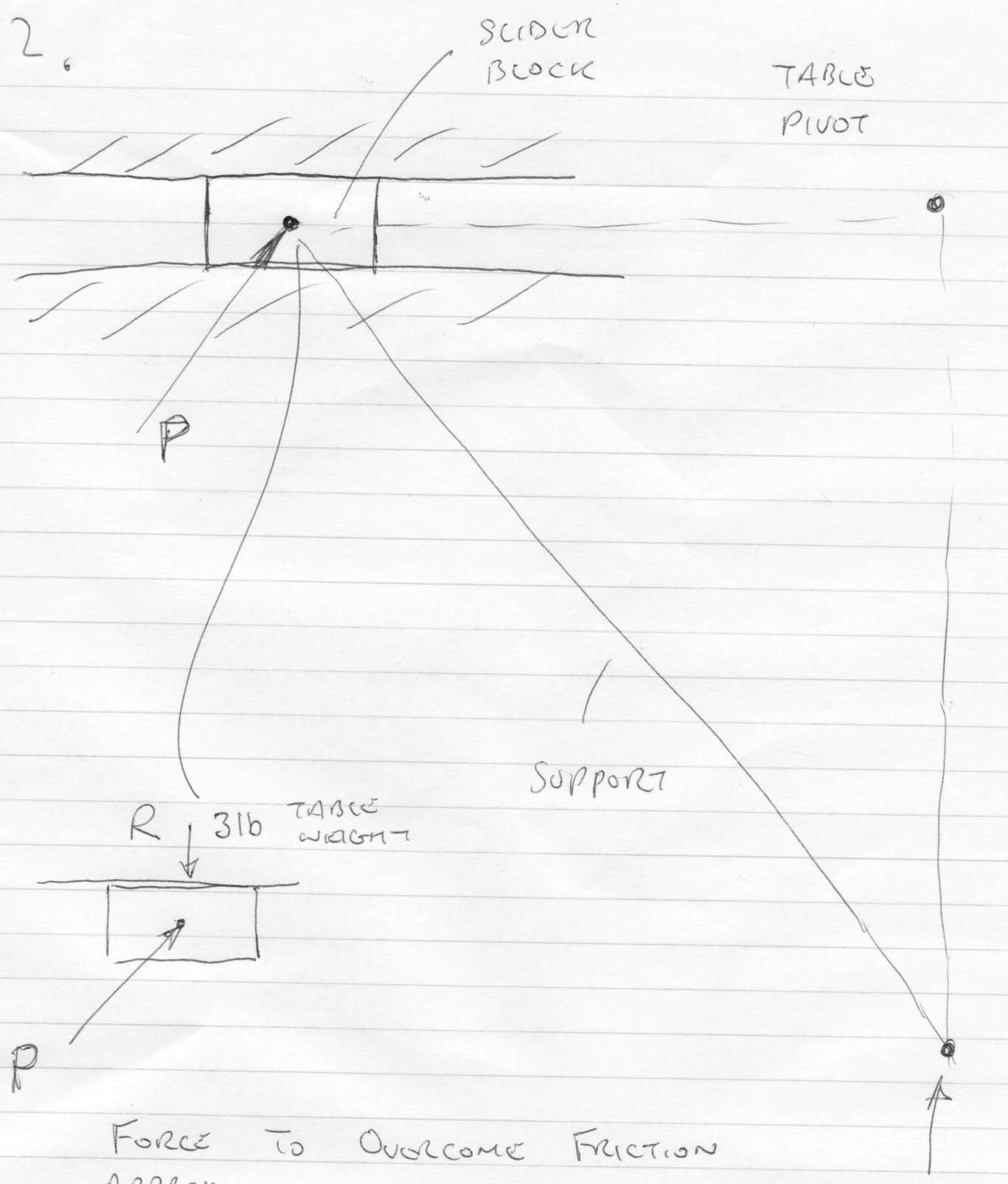


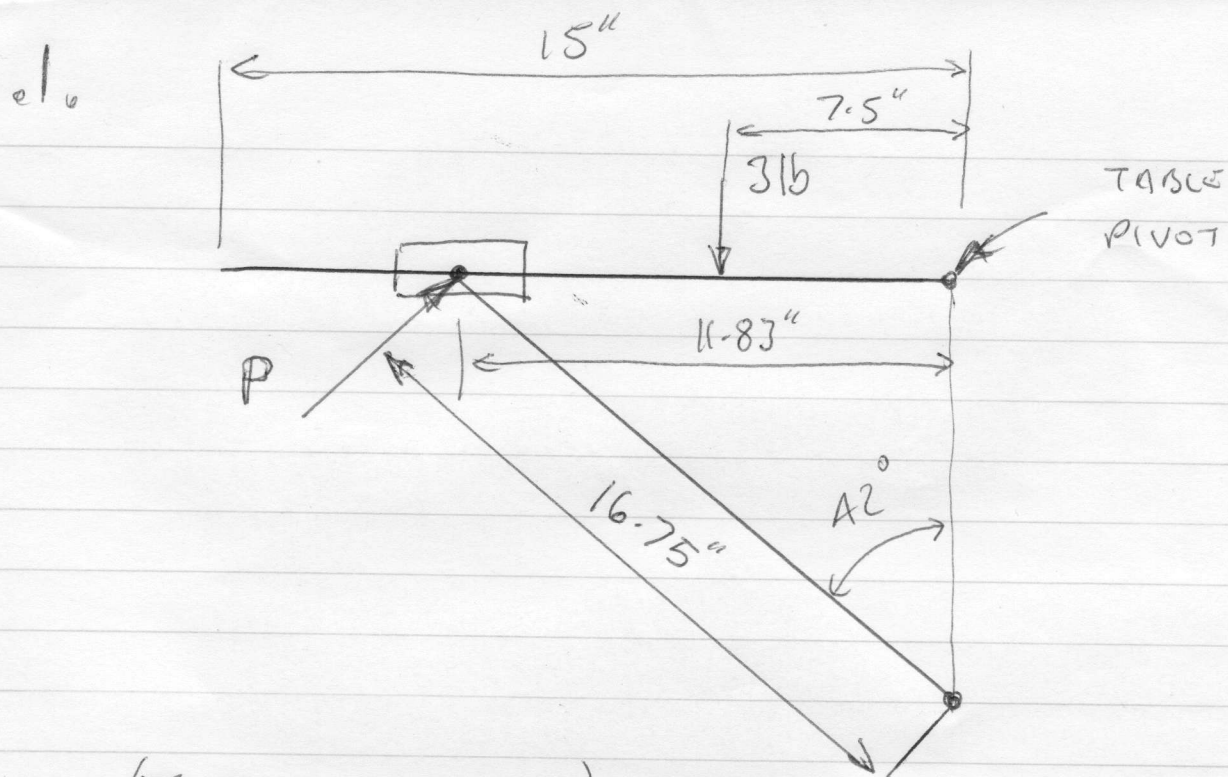
2.



$$F = \mu R = 0.2 \times 3 = 0.6 \text{ lbf}$$

$$P \times \cos 42^\circ \Rightarrow 0.6 \text{ lbf}$$

$$\therefore 2.84 \times \cos 42^\circ = 2.11 \text{ lbf}$$



(TABLE UNLOADED) MOMENT THE SPRING AS TO OVERCOME :-

$$3 \times 7.5 = 22.5 \text{ lbf in}$$

FORCE AT POINT P TO BALANCE TABLE MOMENT

$$\therefore 22.5 \text{ lbf in} = 11.83 \times \cos 48^\circ P$$

$$\therefore P = 2.84 \text{ lbf.}$$

HOWEVER THE TORSION FORCE IS UNLIKELY TO BE APPLIED AT THAT POINT, SO IF THE TORSION SPRING ARM IS ONLY 2" LONG THEN THE FORCE APPLIED AT BOTTOM OF THE SUPPORT WOULD BE :-

$$\frac{2.84 \times 16.75}{2} = 23.8 \text{ lbf}$$