

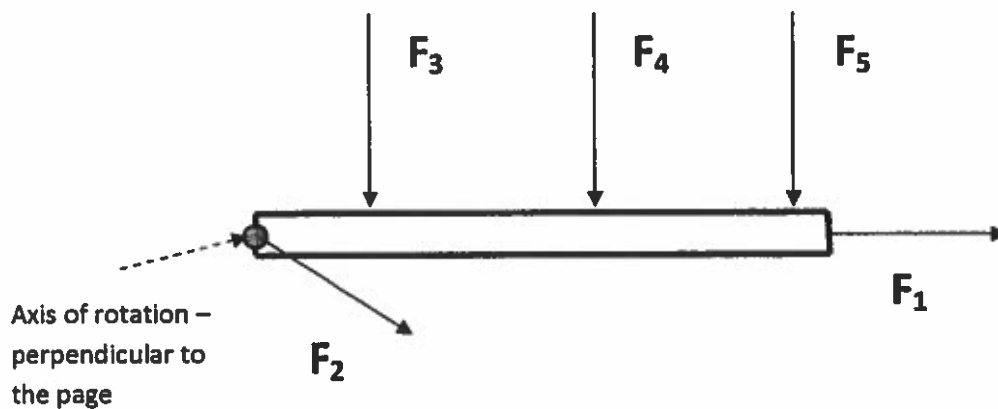
TORQUE (2)

1. In general, if you want to easily rotate an object about an axis, you want a large lever arm d and a large (preferably) perpendicular force F .

Forces F_1 to F_5 have the same magnitude.

a) Order the 5 different possibilities to apply force (1-5) according to decreasing magnitude of torque produced.

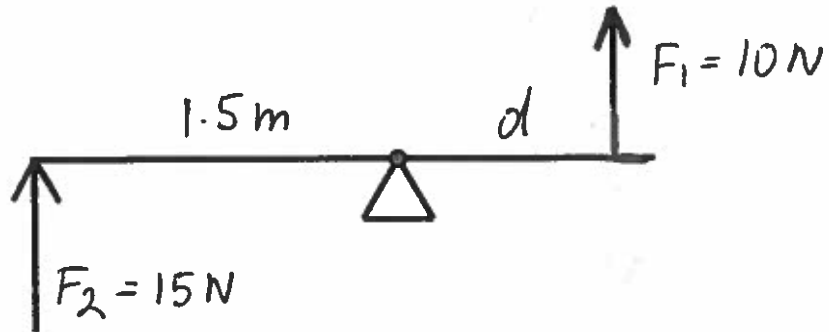
b) Find the exact value of torque for F_1 and F_2 . Support your answer.



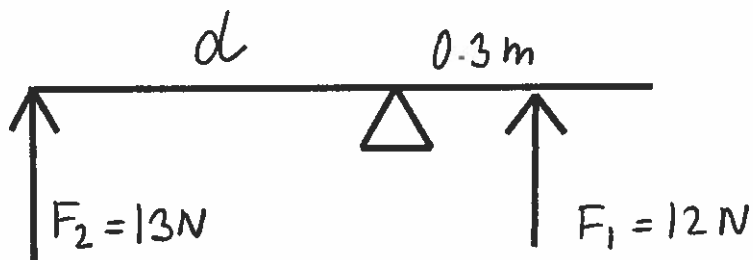
2. State the three quantities that affect the magnitude of torque:

2. Find the magnitude of lever arm necessary to ensure the rotational equilibrium $\sum \vec{\tau} = 0$

a)



b)



c) How far (x) relative to the fulcrum is F_1 applied to maintain the rotational equilibrium?

