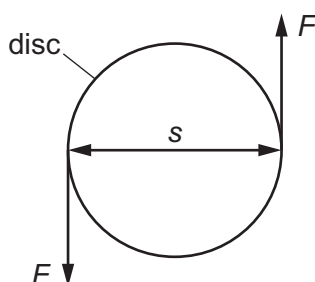


- 11 A cylindrical block of wood has cross-sectional area A and weight W . It is totally immersed in water with its axis vertical. The block experiences pressures p_t and p_b at its top and bottom surfaces respectively.

What is the upthrust on the block?

- A $(p_b - p_t)$
- B $(p_b - p_t)A$
- C $(p_b - p_t)A - W$
- D $(p_b - p_t)A + W$

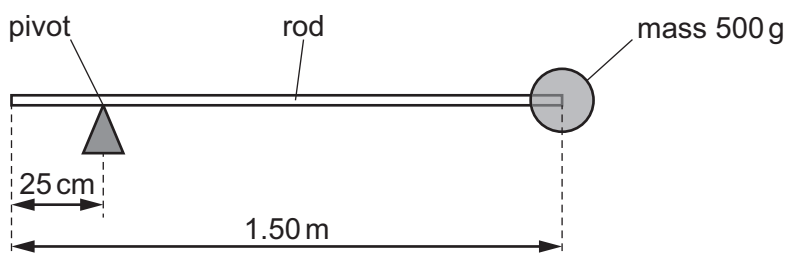
- 12 Two forces, each of magnitude F , act on a disc of diameter s , as shown.



What is the torque exerted on the disc?

- A zero
- B $\frac{1}{2}Fs$
- C Fs
- D $2Fs$

- 13 A mass of 500 g is attached at one end of a rod of length 1.50 m. The rod is pivoted at a distance of 25 cm from the other end. The rod is horizontal.



What is the moment about the pivot due to the mass?

- A 0.63 Nm
- B 1.2 Nm
- C 6.1 Nm
- D 7.4 Nm