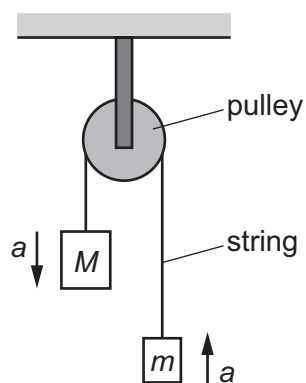**10** Two blocks of masses *M* and *m* are joined by a thin string which passes over a frictionless pulley, as shown.
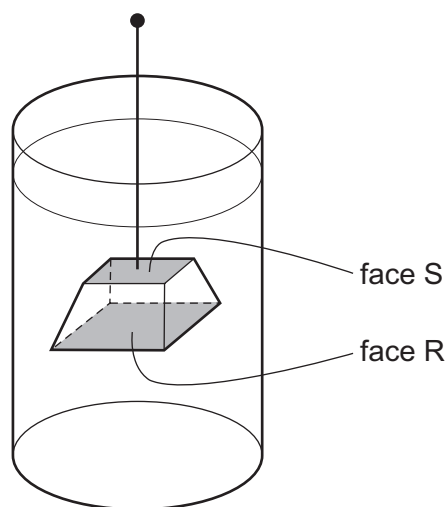


The acceleration of free fall is *g*.

What is the acceleration *a* of the two blocks?

**A** $\dfrac{(M + m)}{(M - m)}g$     **B** $\dfrac{(M - m)}{(M + m)}g$     **C** $\dfrac{M}{m}g$     **D** $\dfrac{m}{M}g$

**11** The diagram shows a block of copper suspended in water.



The block experiences an upthrust from the water.

Which statement is the basis of an explanation for this upthrust?

**A** Copper is more dense than water.

**B** The area of face R is greater than the area of face S.

**C** The density of water increases with depth.

**D** The pressure of water increases with depth.