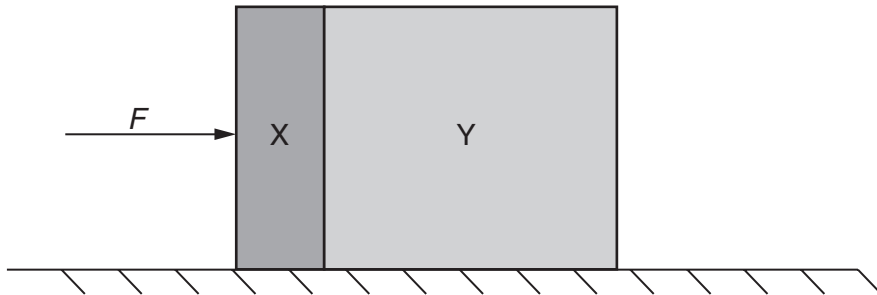**10** Two blocks X and Y, of masses $m$ and $3m$ respectively, are accelerated along a smooth horizontal surface by a force $F$ applied to block X as shown.



What is the magnitude of the force exerted by block X on block Y during this acceleration?

**A** $\dfrac{F}{4}$ **B** $\dfrac{F}{3}$ **C** $\dfrac{F}{2}$ **D** $\dfrac{3F}{4}$

**[Turn over**