

- 12** A rocket has a weight of  $W$  and an initial acceleration of  $a$  as the rocket leaves the ground vertically. The acceleration of free fall is  $g$ .

Which expression gives the initial upward force exerted on the rocket due to the engine?

**A**  $\frac{Wa}{g} + W$

**B**  $\frac{Wa}{g}$

**C**  $\frac{Wa}{g} - W$

**D**  $Wa + W$