Two blocks of mass $M_1$ and $M_2$ lie on a frictionless horizontal plane. The blocks are connected together by a light strong rope. A constant horizontal force $P$ is applied to block $M_1$. Calculate the tension in the rope.

Multiple choice:

(a) $T = \frac{M_2}{M_1 + M_2} P$

(b) $T = (M_1 + M_2) a$

(c) $T = P + M_1 \frac{P}{M_1 + M_2}$

(d) $T = P - (M_1 + M_2)$

(e) $T = \frac{M_2}{M_1} + \frac{M_2}{M_1 + M_2} P$

(f) $T = P - (M_1 + M_2) g$

(g) $T = \frac{M_2}{M_1 + M_2} g$

(h) $T = P - M_1 g$

(i) More than one of the above

(j) None of the above

Answer:__________________