Consider acceleration of Block $A$ across the table toward the pulley. Disregard the frictional forces.

The acceleration of block $A$ is

A) greater in case I.

B) greater in case II.

C) both are the same.
For case I, applying the “$F = ma$” formula gives $mg = (m + m)a_I$. Or

$$a_I = \frac{g}{2}.$$ For case II, correspondingly, $mg = ma_{II}$. It gives $a = g$. So the second case has a greater acceleration. Answer B.

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