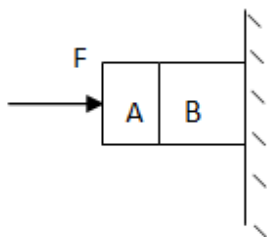




3. Given in the figure are two blocks A and B of weight 20 N and 100 N, respectively. These are being pressed against a wall by a force F as shown. If the coefficient of friction between the blocks is 0.1 and between block B and the wall is 0.15, the frictional force applied by the wall on block B is:



- (1) 100N (2) 80N (3) 120N (4) 150N

Answer: Block B of higher mass will experience higher gravity 100N, hence frictional force will be upward between surface of contact between B and wall. There is also equal and opposite frictional force acting between the surface of contact between A , B. The applied force F is balanced by the equal and opposite reactive force R by wall on B. Free body diagram as shown

	<p>As per the free body diagram we have, at equilibrium force are balanced $F=R$</p> <p>At block A $F_{\text{friction}} = 20\text{N}$</p> <p>At block B</p> <p style="padding-left: 40px;">$F_{\text{friction} + \text{wall}} = F_{\text{friction}} + 100\text{N}$</p> <p>$F_{\text{friction} + \text{wall}} = 20\text{N} + 100\text{N} = 120\text{N}$</p>
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Correct option is (3) 120N