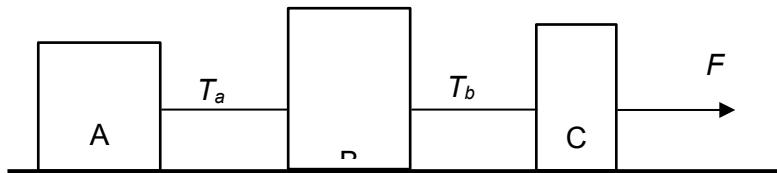


- 5 A force F is applied to pull three objects A, B and C across a frictionless horizontal surface. The three objects are connected by the strings as shown in the figure. The tensions in the strings between A and B is T_a and that between B and C is T_b .



A part of object B is chipped off such that the mass of object B is smaller. The force F remains unchanged and continues to pull the three objects. What are the changes to the tensions T_a and T_b in the strings?

- A** T_a increases and T_b decreases.
- B** T_a increases and T_b increases.
- C** T_a decreases and T_b decreases.
- D** T_a decreases and T_b increases.