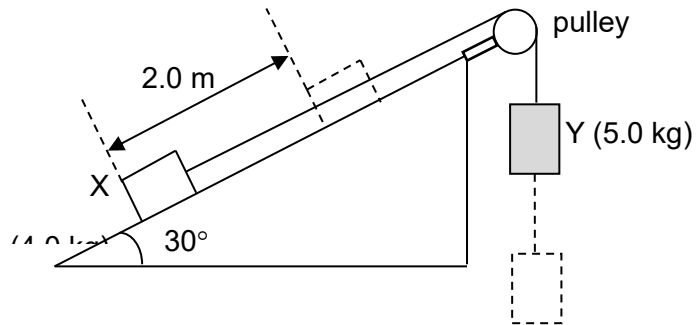


- 8 Two bodies X and Y are connected by a light inextensible cord that is passed over a light free-running pulley as shown.



X lies on a smooth plane inclined at 30° to the horizontal whereas Y is suspended vertically. The mass of X and Y is 4.0 kg and 5.0 kg respectively. When the two bodies are released from rest, X moves up the plane.

What is the total kinetic energy of the system after X has travelled 2.0 m along the inclined plane?

- A** 20 J **B** 59 J **C** 137 J **D** 177 J

