

2-27. A block is lifted up with a constant velocity  $v_B = 2 \text{ m/s}$  by the motor  $M$ . The masses of blocks  $B$  and  $C$  are  $m_B \sim N(500, 5^2) \text{ kg}$  and  $m_C \sim N(100, 2^2) \text{ kg}$ , respectively. If the motor has an efficiency of  $e = 0.7$ , determine the power supplied by the motor. Assume  $m_B$  and  $m_C$  are independent.

**Solution:**  $P \sim N(11.21, 0.15^2) \text{ kW}$ .

