1-5. The end of the cord at A is pulled down with a speed of v_A.

(1) If $v_A = 10$ m/s, determine the speed of block B.

(2) If v_A follows a normal distribution $v_A \sim N(10,1^2)$ m/s, what is the probability that the velocity of block B is greater than 3 m/s ?

Solution: (1) $v_B = \dfrac{1}{4}v_A = \dfrac{1}{4}(10) = 2.5$ m/s $\uparrow$

(2) $P(v_B > 3) = 0.023$