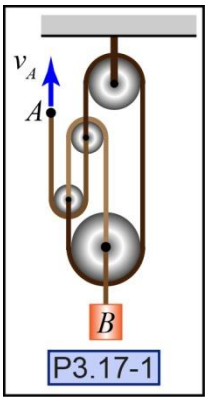
P3.17-1) If the end of the rope at A has an upward velocity of v_A = 12 m/s, determine the velocity of block B. Note that this system has three ropes.

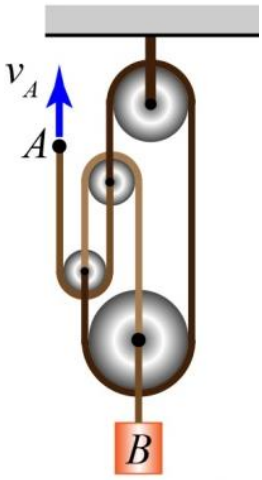


Given:

Find:

Solution:

On the figure, draw the datum(s) and the position coordinates.



Write down the position coordinate equations.

Determine the relationship between v_A and v_B and then the value of v_B.

v_B = _____ v_A

v_B = _____ direction is ↓ ↑