

Quiz 4 Fisika dasar 1A

No 1

•••24 In Fig. 16-35a, string 1 has a linear density of 3.00 g/m , and string 2 has a linear density of 5.00 g/m . They are under tension due to the hanging block of mass $M = 500 \text{ g}$. Calculate the wave speed on (a) string 1 and (b) string 2. (*Hint:* When a string loops halfway around a pulley, it pulls on the pulley with a net force that is twice the tension in the string.) Next the block is divided into two blocks (with $M_1 + M_2 = M$) and the apparatus is rearranged as shown in Fig. 16-35b. Find (c) M_1 and (d) M_2 such that the wave speeds in the two strings are equal.

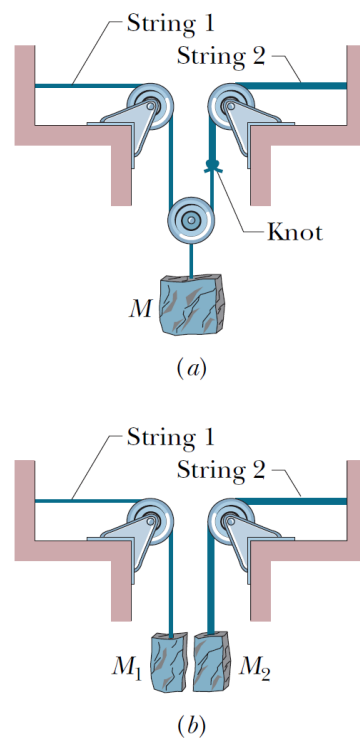


Fig. 16-35 Problem 24.

No 2

•••67 **SSM** **WWW** A girl is sitting near the open window of a train that is moving at a velocity of 10.00 m/s to the east. The girl's uncle stands near the tracks and watches the train move away. The locomotive whistle emits sound at frequency 500.0 Hz . The air is still. (a) What frequency does the uncle hear? (b) What frequency does the girl hear? A wind begins to blow from the east at 10.00 m/s . (c) What frequency does the uncle now hear? (d) What frequency does the girl now hear?