

PHYS UN1601 Recitation Worksheet 5

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Problem 1

In the Atwood's machine shown in Figure 1, the pulleys and strings are massless. Explain why:

- a) The tension is the same throughout the long string, as indicated
- b) The tension in the bottom string is twice the tension in the long string, as indicated
- c) The acceleration of the right mass is negative twice the acceleration of the left mass.

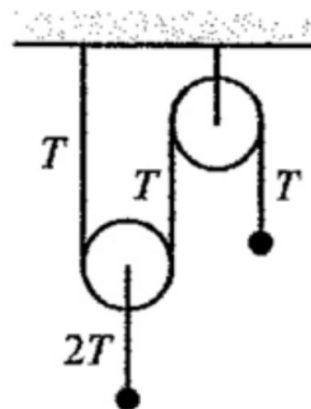


Figure 1

Problem 2

A 45° wedge is pushed along a table with constant acceleration a . A block of mass m slides without friction down the wedge. Find its acceleration.

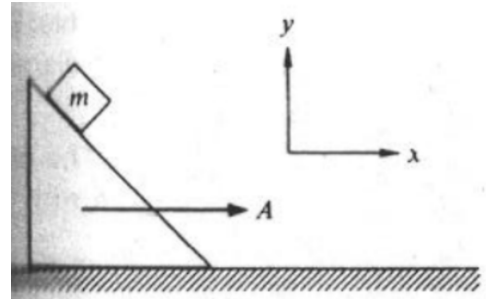


Figure 2