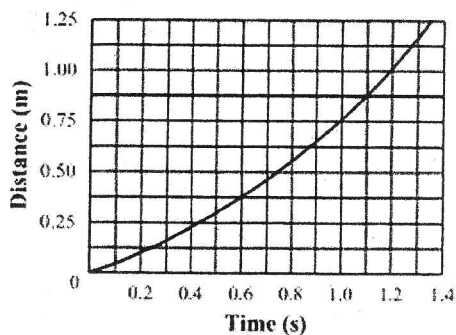


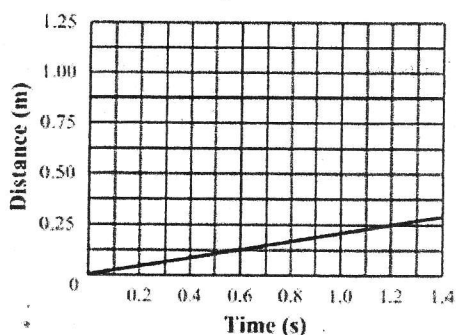
OPEN RESPONSE: **B** MOTION & FORCES

A student is conducting experiments with a block of wood. In experiment 1, the student pulls the block of wood with a constant force of 10 N along a horizontal surface. In experiment 2, the student pulls the same block of wood with a constant force of 10 N. The type of surface is different from that used in experiment 1. The results of experiments 1 and 2 are shown below.

Experiment 1



Experiment 2



- Using information from the graphs, compare the surface in experiment 2 with the surface in experiment 1.
- Determine both the magnitude of the force of friction **and** the net force on the block that are required to achieve the results shown in the graph for experiment 2. Include units in your answer.
- Without changing the type of surface used when pulling the block of wood, list one other change to experiment 1 that would produce the results of experiment 2. Explain your reasoning with reference to the frictional force.

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