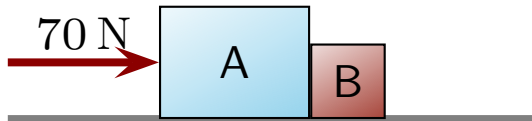


## Question 1

Two blocks are on a frictionless horizontal surface. The larger block has a larger mass than the smaller block. They are in contact with each other while a hand pushes on block A with the indicated force.

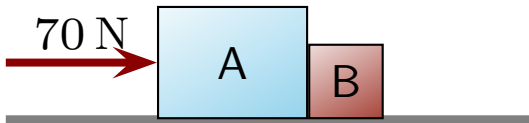


Which of the following is true while the blocks slide along the surface?

1. A always exerts a force on B. B always exerts a force on A.
2. A always exerts a force on B. B never exerts a force on A.
3. A never exerts a force on B. B always exerts a force on A.
4. A never exerts a force on B. B never exerts a force on A.
5. A exerts a force on B only if they move right.
6. B exerts a force on A only if they move left.

## Question 2

Two blocks are on a frictionless horizontal surface. A has mass 50 kg and B has mass 20 kg. They are in contact with each other while a hand pushes on block A with the indicated force.



Which of the following is true while the blocks slide along the surface?

1. The force exerted by A on B is 70 N.
2. The force exerted by A on B is between 70 N and 35 N.
3. The force exerted by A on B is between 35 N and 0 N.

## Question 3

A horizontal rope pulls a box with a constant speed along a rough horizontal floor. Which of the following is an action/reaction pair?

1. The friction force and the tension in the rope.
2. The gravitational force and the normal force.
3. Both of the above options.
4. Neither of the above options.