


**Module 5: Impulse and Momentum**  
**Topic 2 Content: Newton's Third Law Practice Explanations**



The diagram shows a rectangular table with a horizontal top surface and two vertical legs. A horizontal bar is attached to the top surface. A string is attached to the right end of this bar, passes over a pulley at the edge of the table, and then hangs down to a small square mass. The text 'Newton's Third Law' is overlaid in a large, semi-transparent font.

# Newton's Third Law

In the following slides, a mass sits on a rough table at rest. It is attached by a string over a pulley to another hanging mass as shown. Take a moment to identify all Newton's third law force pairs.

Click NEXT to begin.

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## Module 5: Impulse and Momentum

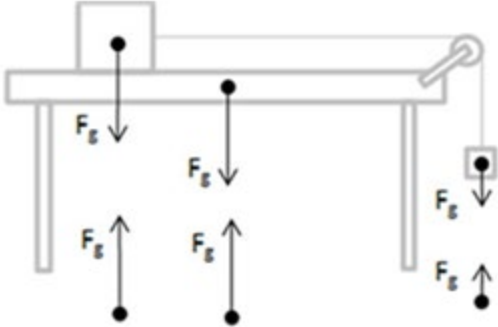
### Topic 2 Content: Newton's Third Law Practice Explanations

Identify the force pair of Newton's Third Law exhibited in the image. Drag and drop the name of the force pair to the blank.

Gravitational Force

Tension Force

Normal and Frictional Force



Click submit after selecting your answer.  
Make sure to read and listen to the explanation that follows.

#### Problem 1:

Identify the force pair of Newton's Third Law exhibited in the image. Drag and drop the name of the force pair to the blank.

#### Explanation:

The gravitational force acts between the hanging mass and the earth, pulling the hanging mass down and the earth up.

The gravitational force acts between the mass sitting on the table and the earth, pulling the sitting mass down and pulling the earth up.

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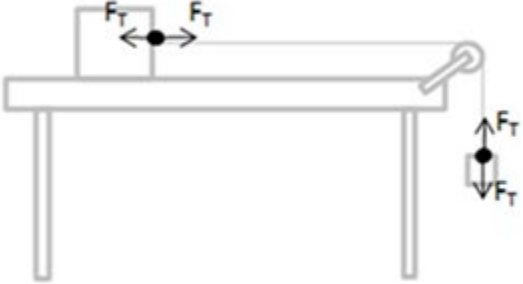
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Gravitational Force

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#### Problem 2:

Identify the force pair of Newton's Third Law exhibited in the image. Drag and drop the name of the force pair to the blank.

#### Explanation:

A tension force acts between the rope and the hanging mass, pulling the mass up and pulling the rope down.

A tension force acts between the sitting mass and the rope, pulling the sitting mass to the right and pulling the rope to the left.

## Module 5: Impulse and Momentum

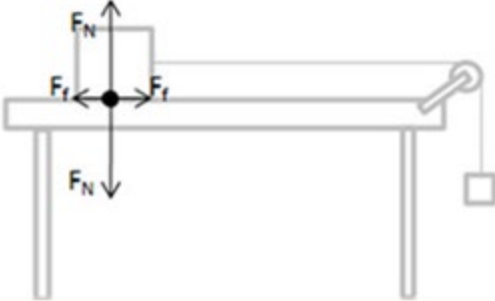
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Gravitational Force

Tension Force

Normal and Frictional Force



The diagram shows a block on a table. A hanging mass is attached to the right side of the table. Four force vectors are shown:  $F_N$  pointing up from the block,  $F_N$  pointing down from the block,  $F_f$  pointing left from the block, and  $F_f$  pointing right from the block. The hanging mass is connected to the table by a string that passes over a pulley.

#### Problem 3:

Identify the force pair of Newton's Third Law exhibited in the image. Drag and drop the name of the force pair to the blank.

#### Explanation:

A normal force acts between the table and the sitting mass, pushing the sitting mass up and pushing the table down.

A frictional force acts between the table and the sitting block, pushing the sitting block to the left and pushing the table to the right.

Can you find more?