

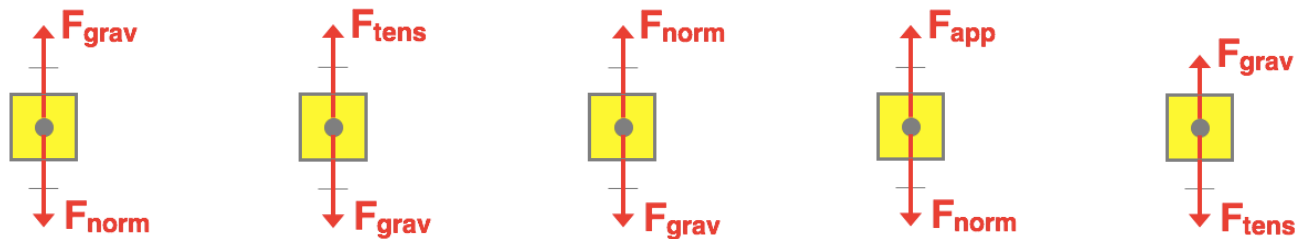
Match That Free-Body Diagram

Read the description of the physical situation and tap on the diagram to select the free-body diagram that shows the correct type, direction, and relative strength of individual forces.

Question Group 1:

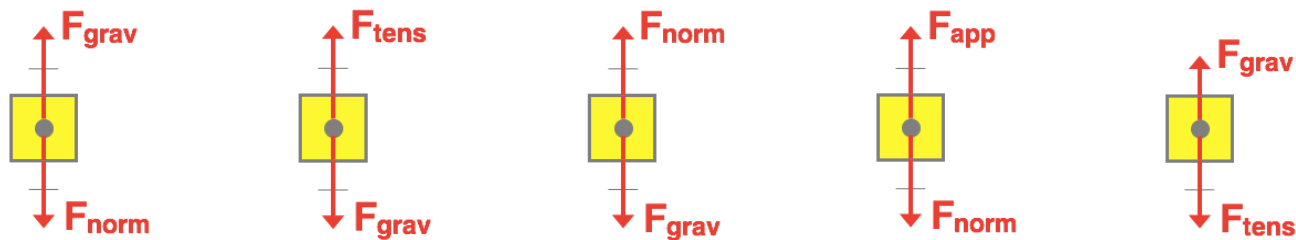
Question 1:

A book is at rest on a table.



Question 2:

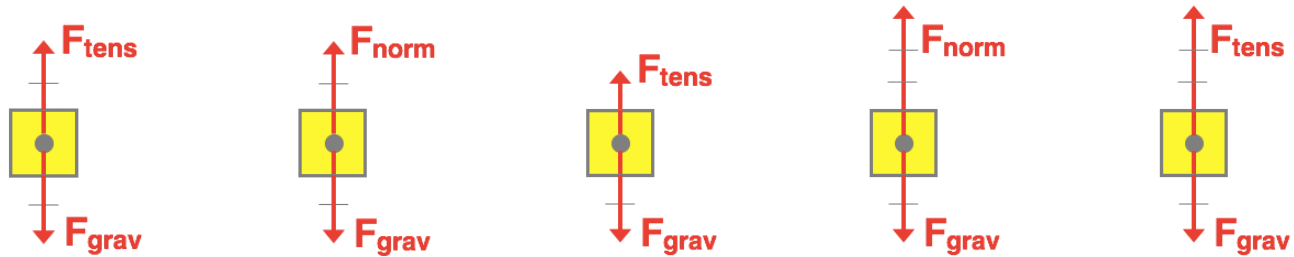
A student is sitting in his chair watching a slide presentation.



Question Group 2:

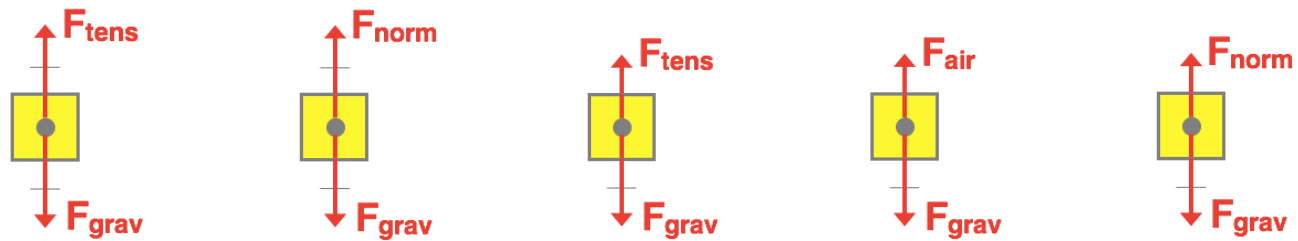
Question 3:

A rope is used to pull a bucket of water upward out of a well at a constant speed.



Question 4:

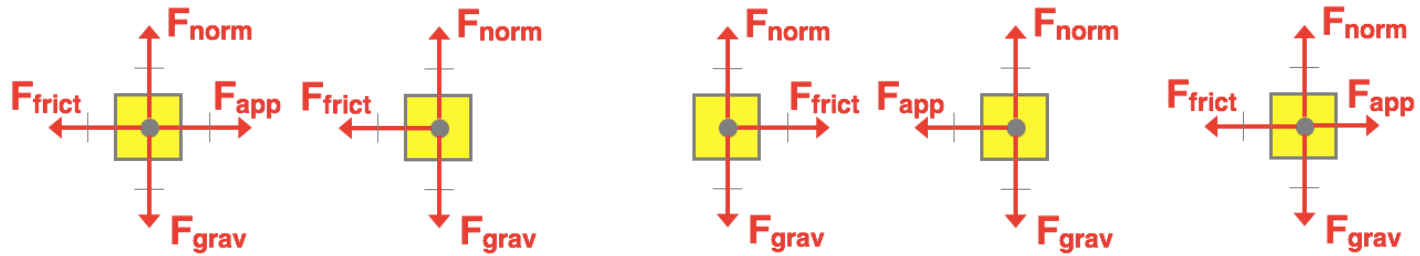
A rope is used to lower a bucket of water downward into of a well at a constant speed.



Question Group 3:

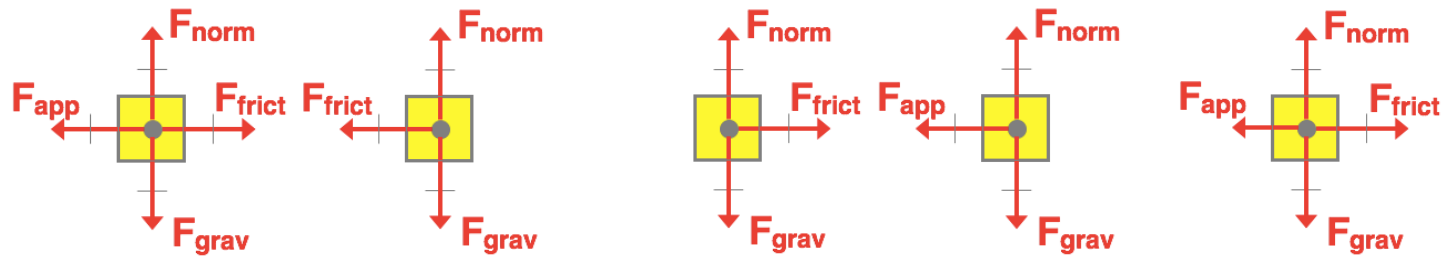
Question 5:

A rightward-moving car skids to a stop (with locked wheels).



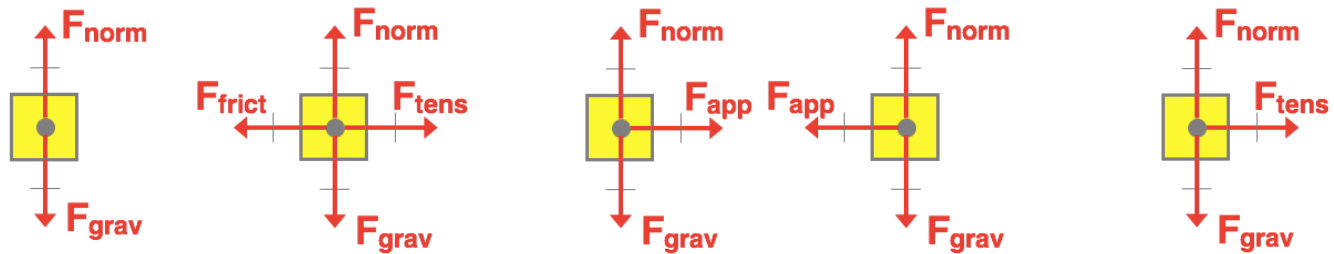
Question 6:

A leftward-moving car skids to a stop (with locked wheels).

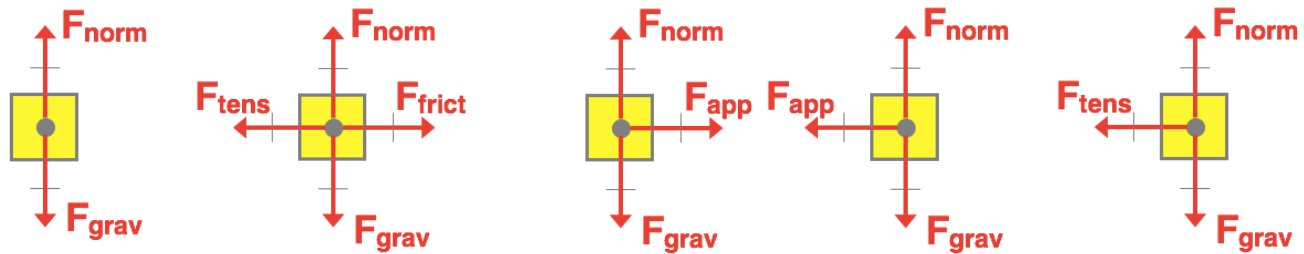


Question Group 4:**Question 7:**

A bundle of hay, attached to a truck by a rope, is moved across the dirt to the right at a constant speed.

**Question 8:**

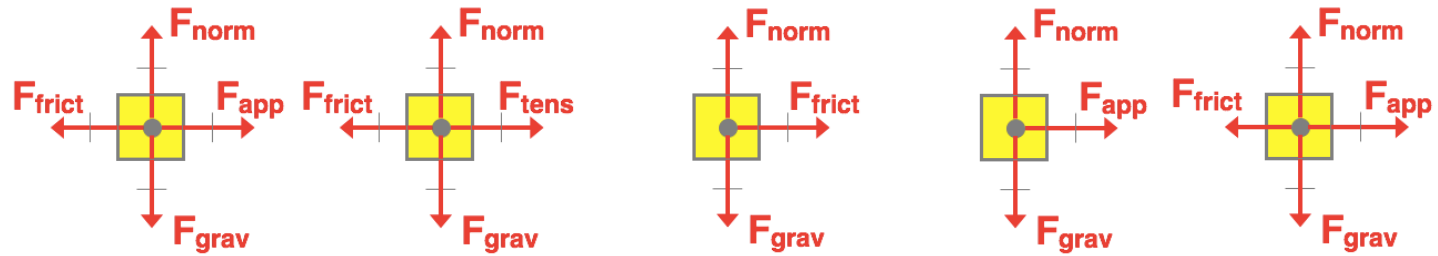
A bundle of hay, attached to a truck by a rope, is moved across the dirt to the left at a constant speed.



Question Group 5:

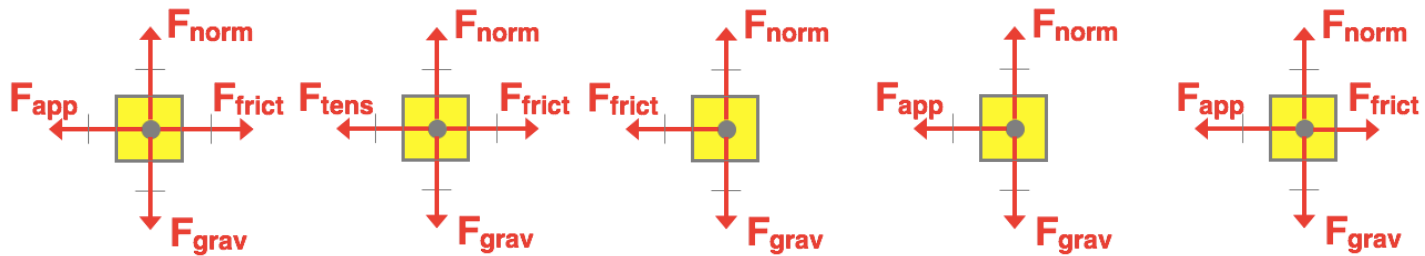
Question 9:

A custodian pushes a crate to the right across the gym floor at a constant speed.



Question 10:

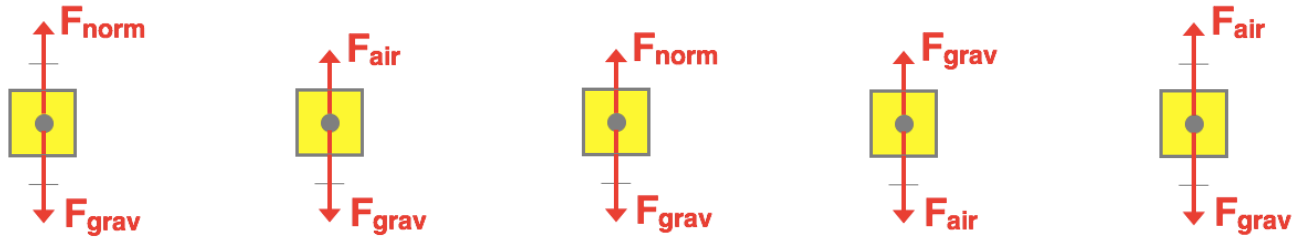
A custodian pushes a crate to the left across the gym floor at a constant speed.



Question Group 6:

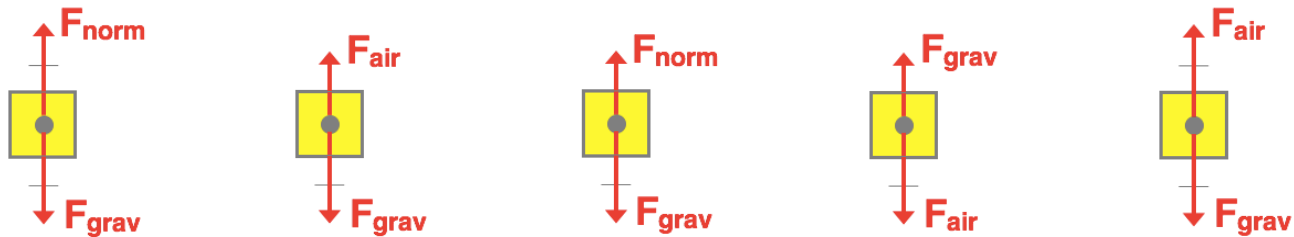
Question 11:

A skydiver (with an un-opened parachute) is falling downward through the air at a constant speed.



Question 12:

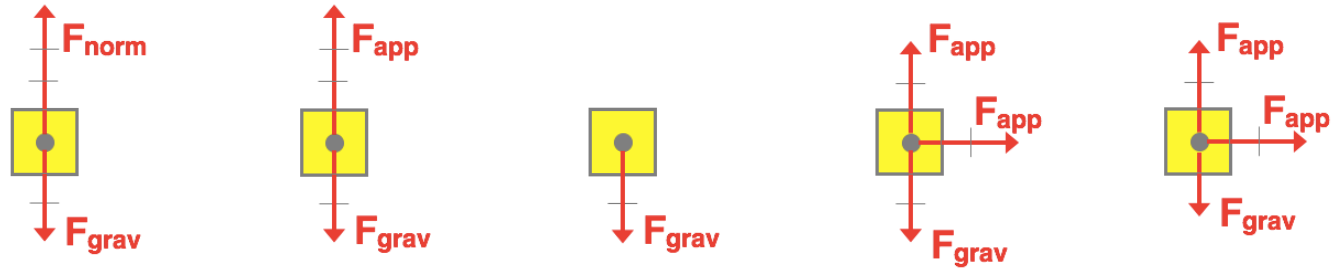
A skydiver (with an un-opened parachute) is falling downward through the air at a constant speed.



Question Group 7:

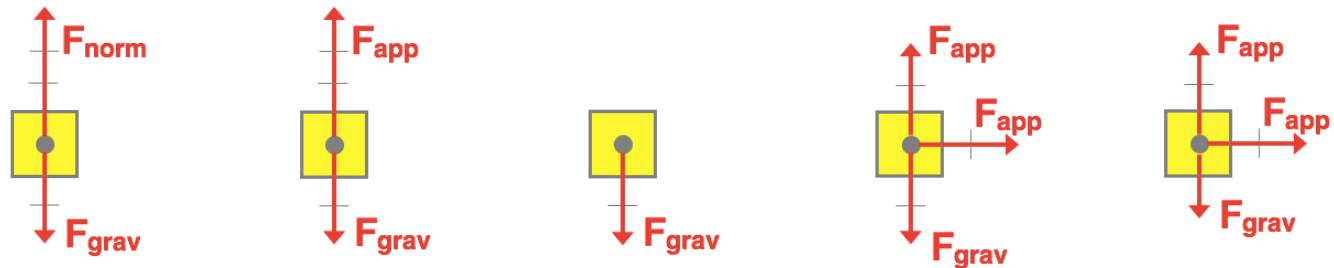
Question 13:

A baseball is moving through the air, upward and rightward towards the peak of its trajectory. (Assume there is negligible air resistance.)



Question 14:

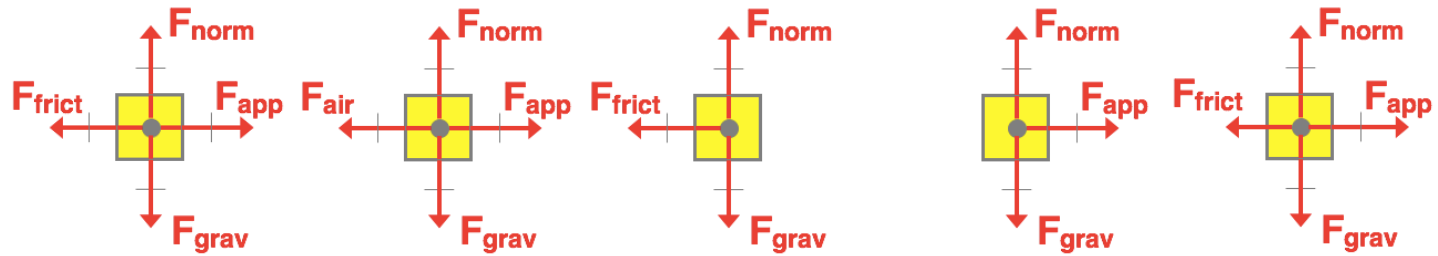
A baseball is moving through the air, upward and leftward towards the peak of its trajectory. (Assume there is negligible air resistance.)



Question Group 8:

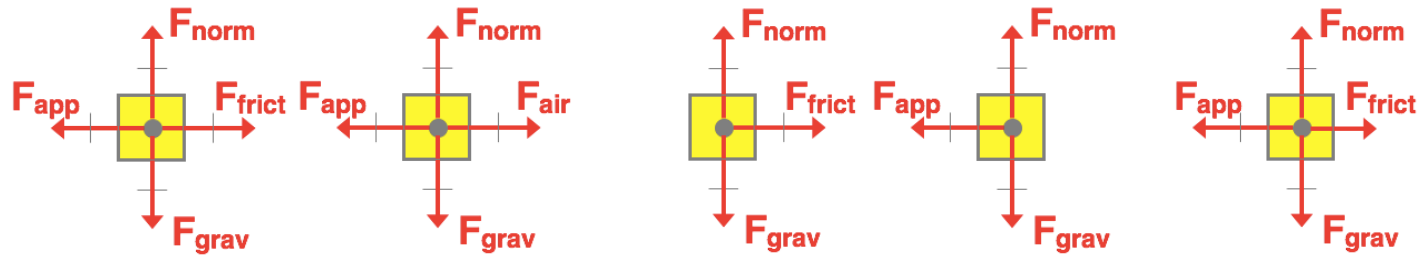
Question 15:

A rightward moving sledder is slowing down as she glides across a patch of loosley-packed snow.



Question 16:

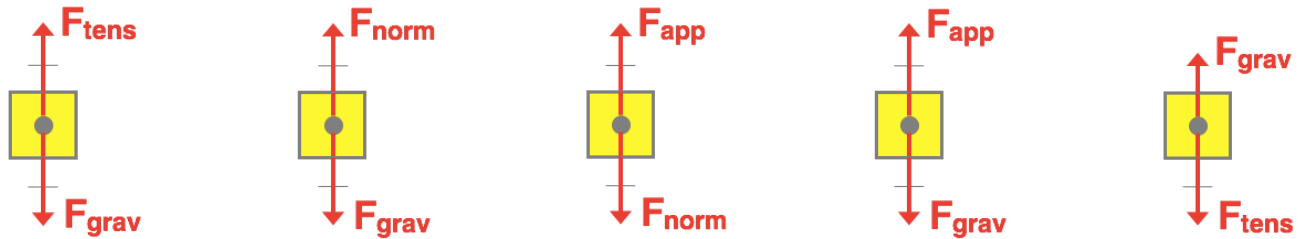
A leftward moving sledder is slowing down as she glides across a patch of loosley-packed snow.



Question Group 9:

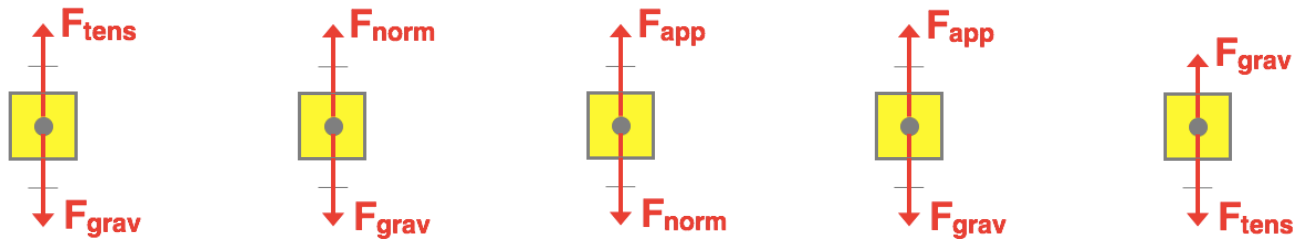
Question 17:

A ball is suspended motionless from the end of a string.



Question 18:

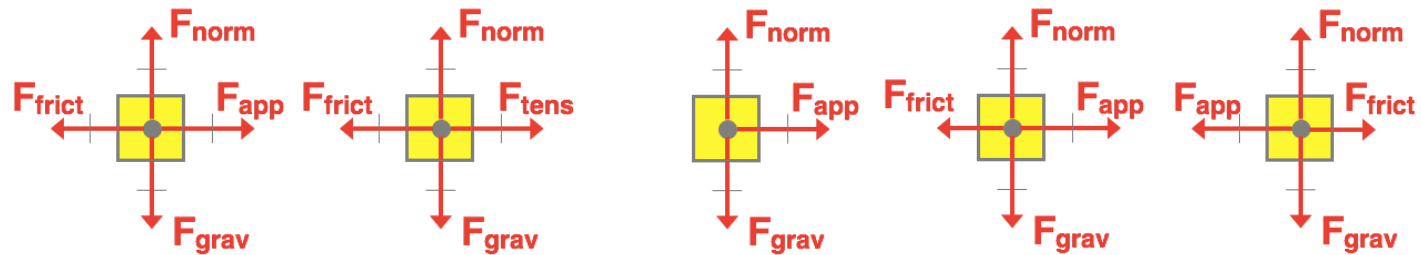
A book is suspended motionless from the end of a string.



Question Group 10:

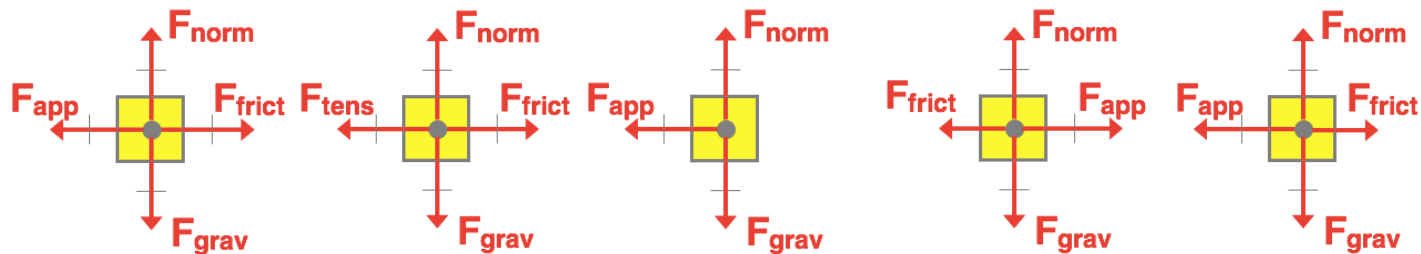
Question 19:

A student pushes a box of books to the right across the bookstore floor at a constant speed.



Question 20:

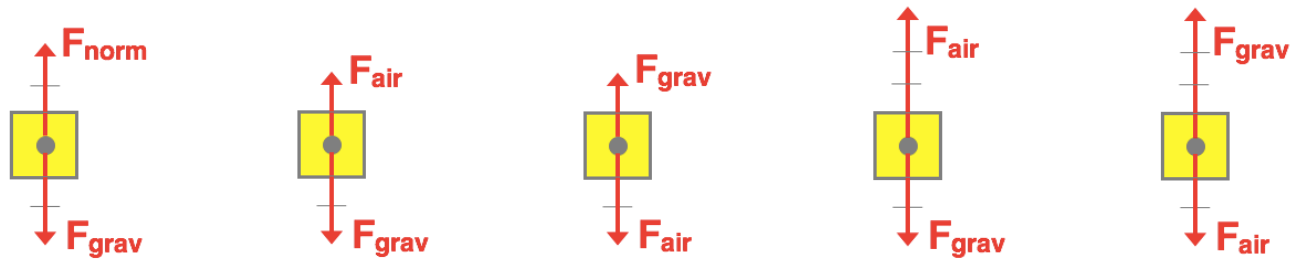
A student pushes a box of books to the left across the bookstore floor at a constant speed.



Question Group 11:

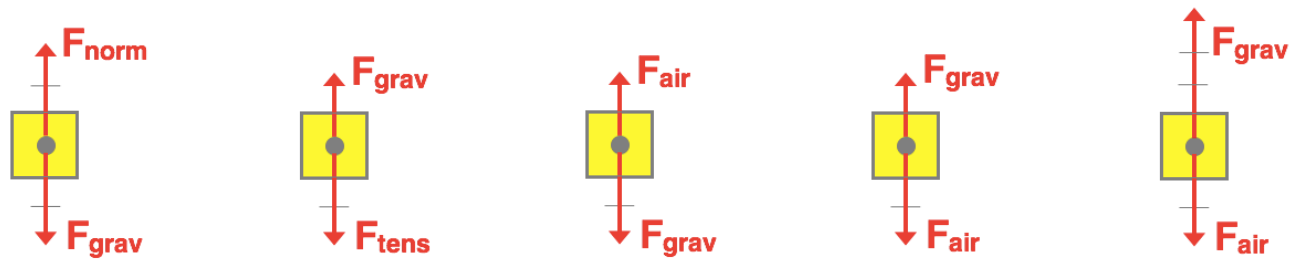
Question 21:

A downward-moving skydiver maneuvers into a spread eagle position and momentarily slows down.



Question 22:

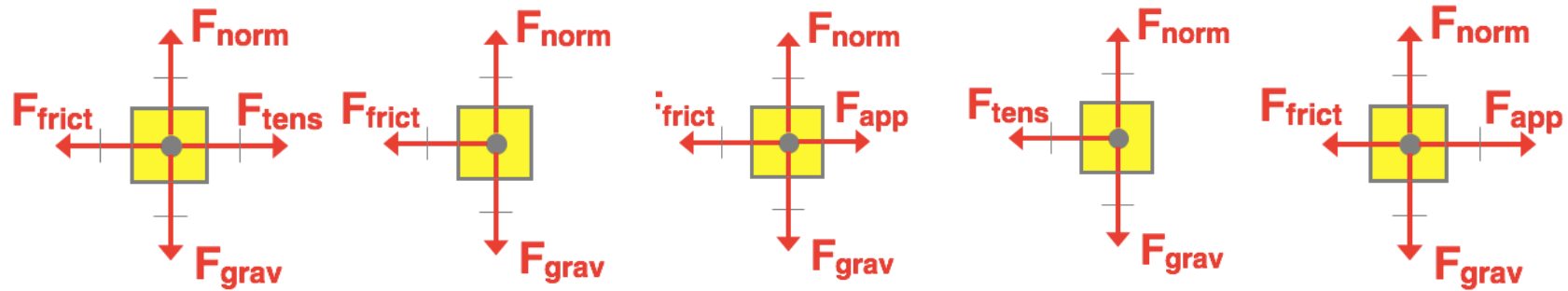
A downward-moving skydiver maneuvers into a pike position and momentarily speeds up.



Question Group 12:

Question 23:

A rightward-moving baseball player slows to a stop while sliding across the infield dirt.



Question 24:

A leftward-moving baseball player slows to a stop while sliding across the infield dirt.

