



6. Explain why sportsmen use shoes with spikes.

Answer:

Sportsman use shoes with spike to increase the friction so that the shoes do not slip while they run or play.

7. Iqbal has to push a lighter box and Seema has to push a similar heavier box on the same floor. Who will have to apply a larger force and why?

Answer:

Seema will have to apply larger force since she will experience more frictional force because heavy object will be pressed hard against the opposite surface and produces more friction.

8. Explain why sliding friction is less than static friction.

Answer:

Sliding friction is always less than static friction because two sliding objects find less time to get interlocked against each other's irregularities of surfaces as a result of which they experience less friction.

9. Give examples to show that friction is both a friend and a foe.

Answer:

Friction as friend:

- We are able to walk because of friction.
- Friction between the tip of the pen and a paper allows us to write.

Friction as foe:

- Tyres and soles of shoes wear out because of friction.
- Friction between the different parts of machines produces heat. This can damage the machines.

10. Explain why objects moving in fluids must have special shapes.

Answer:

When a body moves through a fluid, it experiences an opposing force which tries to oppose its motion through the fluid. This opposing force is known as the drag force. This frictional force depends on the shape of the body. By giving objects a special shape, the force of friction acting on it can be minimised. Hence, it becomes easier for the body to move through the fluid.

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