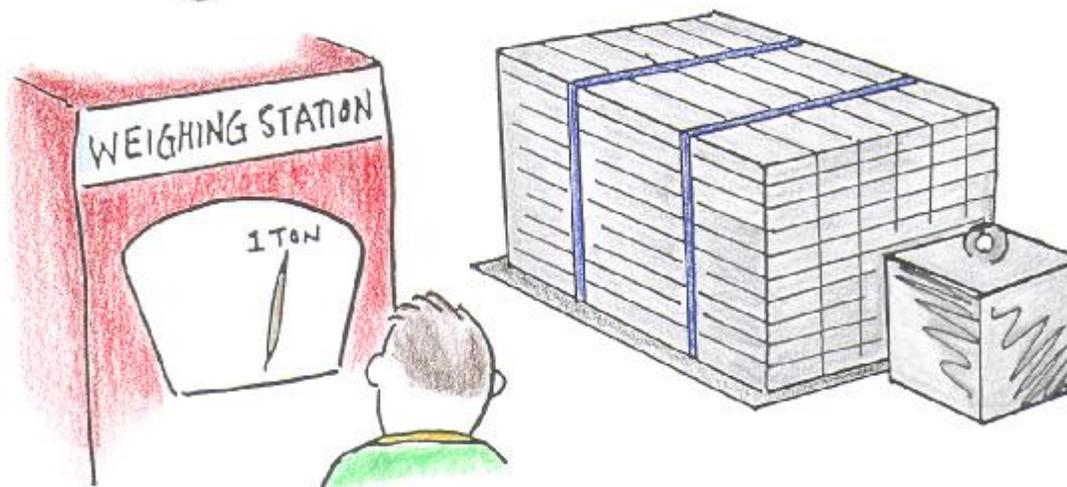


# NEXT-TIME QUESTION

CONCEPTUAL Physics



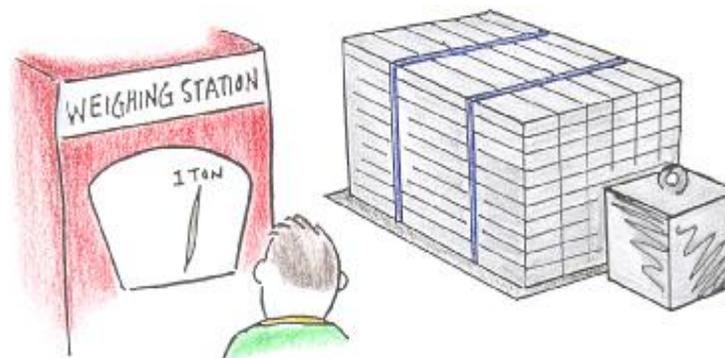
A block of wood and a block of iron on weighing scales each weigh 1 ton. Strictly speaking, which has the greater mass?

Take buoyancy of air into account!



# NEXT-TIME QUESTION

A block of wood and a block of iron on weighing scales each weigh 1 ton. Strictly speaking, which has the greater mass?



Answer:

The wood has the greater mass. Why? Because the scale reading is weight *minus* the buoyant force of the surrounding air. The wood has a greater volume, displaces more air, and therefore has a greater buoyant force. To yield the same scale reading it must therefore have a greater mass than the iron.

