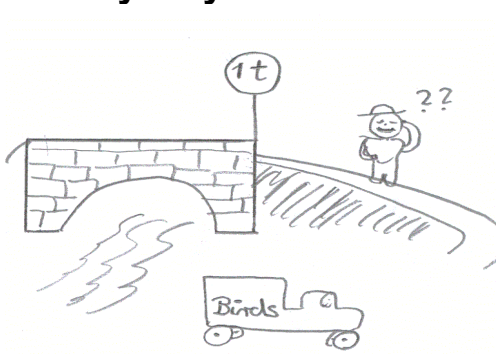


MOIST PROCESSES Game

1. Buoyancy:



A farmer is on his way with his lorry. He has a load of carrier pigeons that are in a big container. He arrives at the bridge, and the traffic sign tells him that the bridge only allows a weight of 1 tonne maximum. But his lorry with the cage (but without the pigeons) already weighs 1 t and is significantly heavier with the well-fed birds. So, what to do??? He was thinking some time, then clever as he is, he knocked with a stick on the cage so that all the pigeons started to fly in the container, and then drove on the bridge. Did the bridge break or could he pass? does it matter if the container is a cage or sealed?

2. Boiling

What is the boiling temperature of water on top of the Mount Ararat (Turkey, formerly Armenia, 5200 m)?

3. The medical test or weather forecast confusion

A man goes to the Doctor for a Cov-19 lateral flow test. The Doctor tells him that the test will be 90% accurate and that the probability (frequency) of having the illness is 1% in this country. The test results came back and were positive, the man went home got drunk and lost his mind. What went wrong?

In weather forecast terms this would mean that if our forecast for rain is 90% accurate and that it rains in 1% of the days, what is the probability it actually rains when the forecast is for rain?

Ps : A useful equation ??, see moist thermodynamics lecture note [54]
 $e=611.2 \exp[17.5(T-273.16)/(T-32.19)]$