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Three tubs are brimful with ice-cold water. Each has an iceberg floating in it. In tub A, the berg has a large air bubble. In tub W, the berg has some unfrozen water inside it. In tub M, the berg has a heavy metal rod inside it. What happens to the water level in each of the three tubs when the icebergs melt?

M gets lower, W and A stay the same to a good approximation (95%)

M gets lower, W spills over and A gets lower (50%)

1

When a solid iceberg melts, does the water level remain unchanged (to a good approximation)?

Yes (97%)

Yes (70%)

4

Is the volume of water that a solid iceberg displaces before it melts the same as the volume of water the iceberg turns into after it melts (to a good approximation)?

Yes (98%)

Yes (80%)

6

Is the amount of water the iceberg displaces before it melts a volume of water equal to the mass of the iceberg (to a good approximation)?

Yes (99%)

Yes (85%)

8

[LEAF] Is the iceberg mentioned here floating in water before it melts?

Yes (~100%)

Yes (99%)

9

Do objects floating in water displace a volume of water that has equal weight to the object?

Yes (99%)

Yes (94%)

12

Wikipedia: " Any floating object displaces its own weight of fluid. "

32

Does 'weight' as used in 9 mean weight in air, not in a vacuum?

Yes (99%)

Yes (99%)

13

Wikipedia: "weight of displaced fluid=weight of object in vacuum - weight of object in fluid"

10

In the scenario referenced here, is 'a volume of water that has the same weight as the iceberg' equivalent to 'a volume of water that has the same mass as the iceberg', to a good approximation?

Yes (99%)

Yes (92%)

7

Is the volume of water the iceberg turns into after it melts also a volume of water equal to the mass of the iceberg?

Yes (99%)

Yes (95%)

5

Conditioned on 1=4, does the water level remain unchanged when a solid iceberg melts (to a good approximation)?

Yes (99%)

Yes (90%)

19

Does A behave the same as a solid iceberg w.r.t. changes in water level (to a good approximation)?

Yes (99%)

Yes (87%)

22

Can you transform A into a solid iceberg without changing its effect on the water level?

Yes (99%)

Yes (95%)

2

Conditioned on 1=Yes, does the water level in W and A stay the same (to a good approximation)?

Yes (98%)

Yes (70%)

20

Does W behave the same as a solid iceberg w.r.t. changes in water level (to a good approximation)?

Yes (99%)

Yes (85%)

21

Does 1=Yes mean that the water level stays the same in the case of a solid iceberg (to a good approximation)?

Yes (~100%)

Yes (99%)

3

Does the water level in M get lower?

Yes (99%)

Yes (70%)