

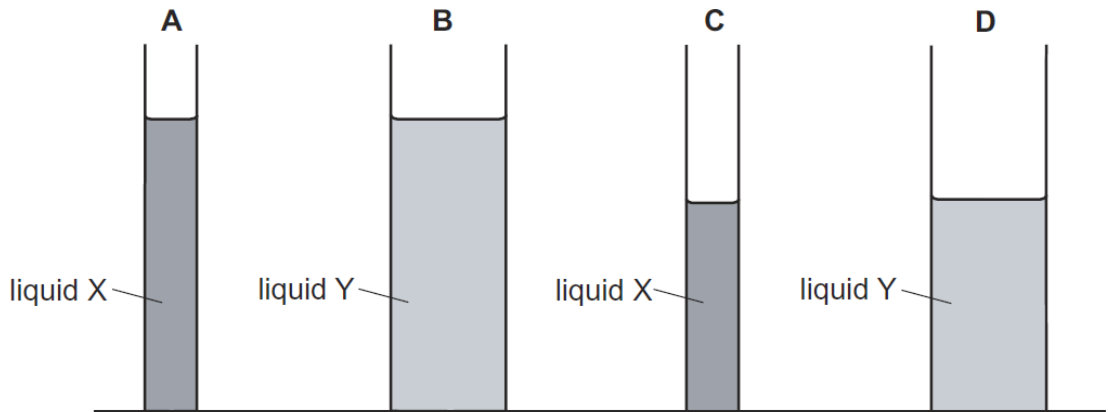
### PRESSURE-SET-3

1

Liquid X has a density of  $1010 \text{ kg/m}^3$ . Liquid Y has a density of  $950 \text{ kg/m}^3$ .

The liquids are poured into tubes as shown.

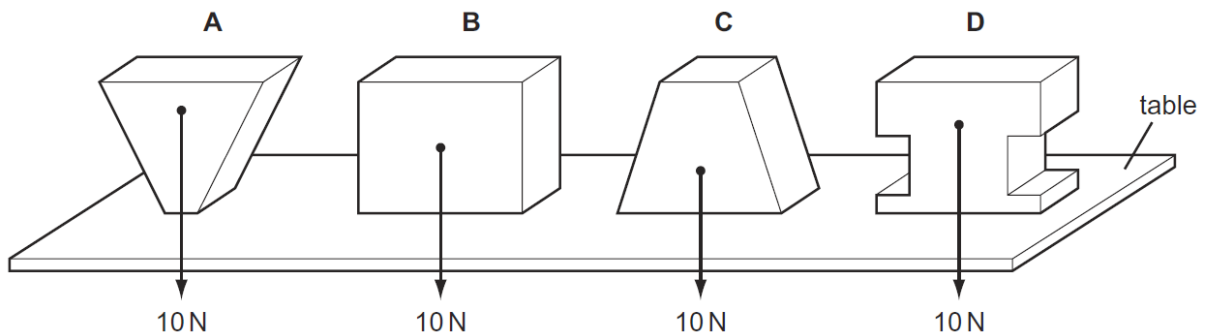
Which tube has the greatest pressure on its base?



2

Four blocks, each weighing  $10 \text{ N}$ , rest on a horizontal table.

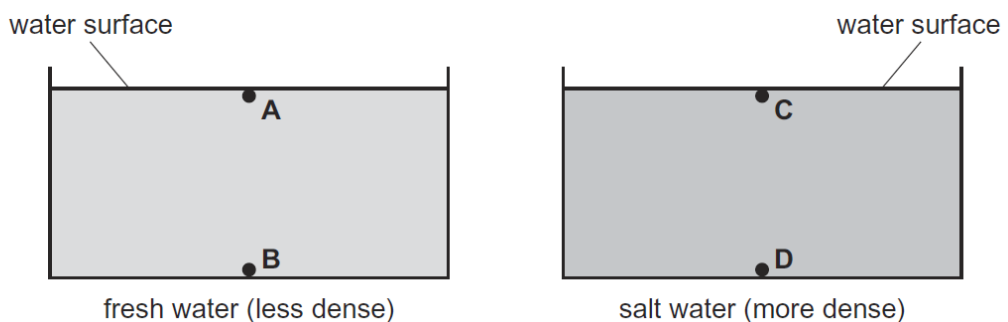
Which block applies the greatest pressure on the table?



3

The diagrams show two swimming pools. One contains fresh water and the other contains salt water. Salt water is more dense than fresh water.

At which labelled point is the pressure the greatest?

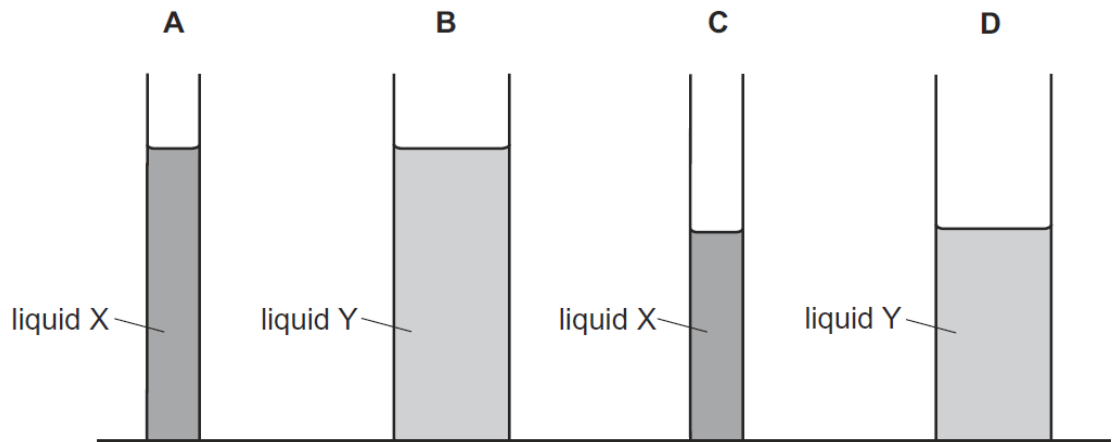


4

Liquid X has a density of  $1010 \text{ kg/m}^3$ . Liquid Y has a density of  $950 \text{ kg/m}^3$ .

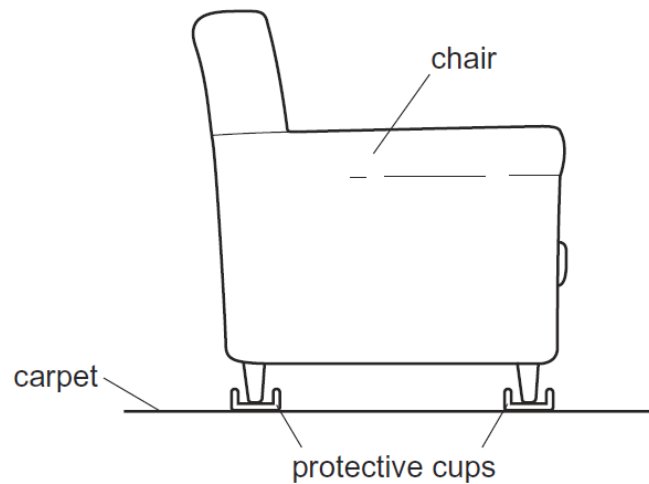
The liquids are poured into tubes as shown.

Which tube has the greatest pressure on its base?



5

A chair is placed on protective cups to prevent damage to the carpet underneath it.

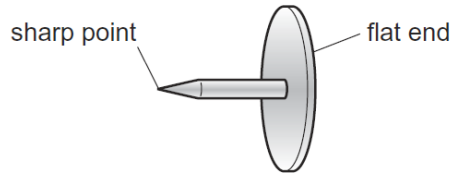


How do the cups change the area of contact with the carpet and the pressure on it?

	area of contact	pressure
<b>A</b>	decreased	decreased
<b>B</b>	decreased	increased
<b>C</b>	increased	decreased
<b>D</b>	increased	increased

6

A drawing pin (thumb tack) has a sharp point and a flat end.



The pin is pushed into a wooden board.

How do the pressure and the force at the sharp point compare with the pressure and the force at the flat end?

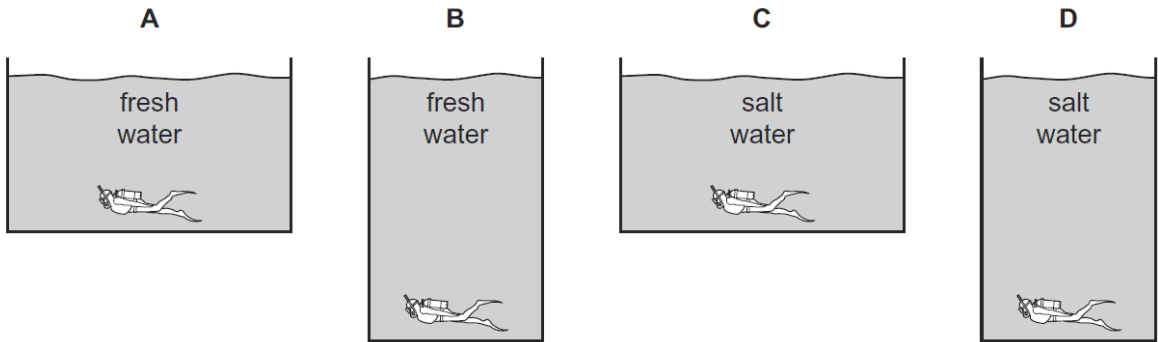
	force at the sharp point	pressure at the sharp point
<b>A</b>	greater than at the flat end	greater than at the flat end
<b>B</b>	greater than at the flat end	less than at the flat end
<b>C</b>	the same as at the flat end	greater than at the flat end
<b>D</b>	the same as at the flat end	less than at the flat end

7

The diagrams show four divers at the bottom of four different swimming pools.

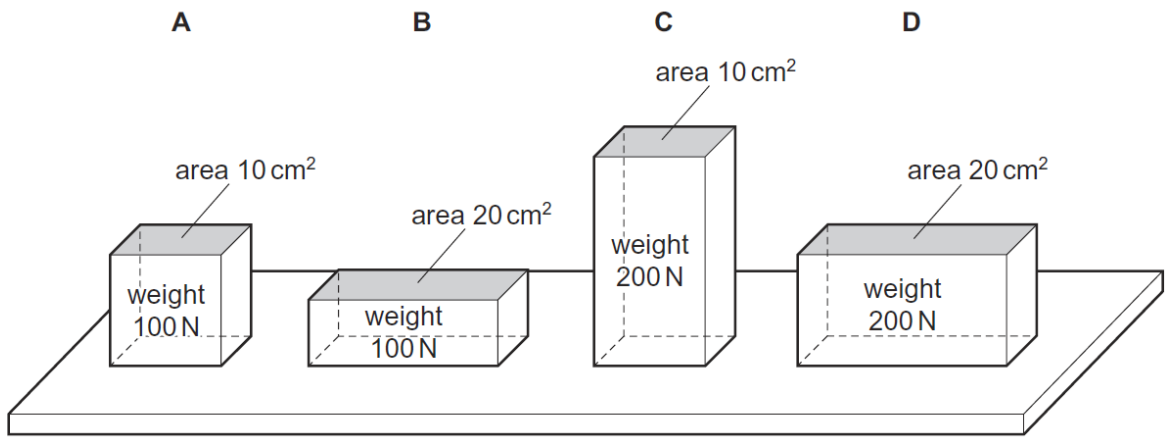
Two swimming pools contain fresh water and two contain salt water. Fresh water is less dense than salt water.

Which diver feels the least pressure from the water?



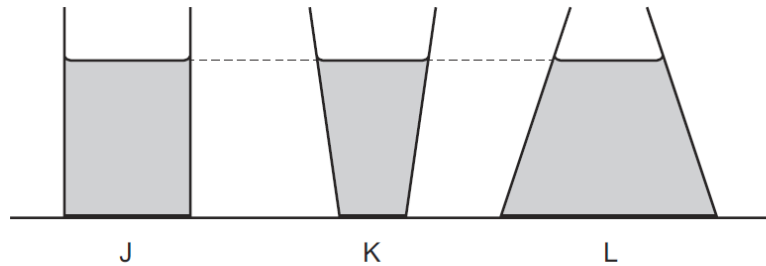
8

Which block exerts the greatest pressure on the surface below it?



9

The diagram shows three different containers J, K and L. Each container contains water of the same depth.

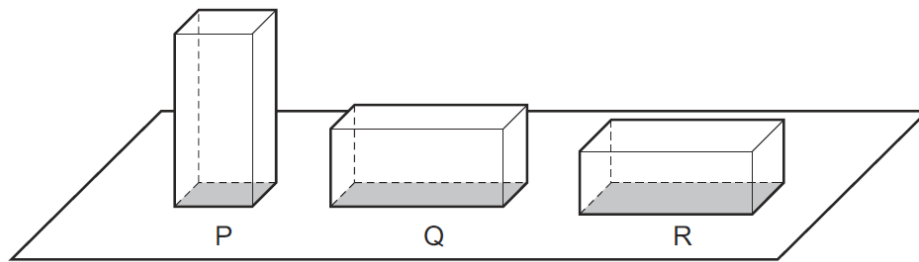


Which statement about the pressure of the water on the base of each container is correct?

- A The water pressure is greatest in container J.
- B The water pressure is greatest in container K.
- C The water pressure is greatest in container L.
- D The water pressure is the same for all three containers.

10

The scale diagram shows three identical blocks, P, Q and R. The blocks have different areas of contact with the ground.



Which block exerts the greatest pressure on the ground?

- A** block P
- B** block Q
- C** block R
- D** they all exert the same pressure

11

Four physics teachers investigate pressure. They wear identical clothes and lie on different beds of nails.

The table gives the weight of each teacher and the total area of contact between the teacher and the nails.

Which teacher experiences the least pressure from the nails?

	weight of teacher / N	total area of contact / cm <sup>2</sup>
<b>A</b>	700	13
<b>B</b>	800	20
<b>C</b>	900	14
<b>D</b>	1000	21