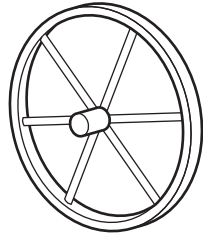
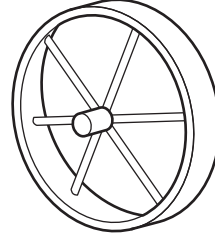


0654-PAPER-2PRESSURE-SET-1-MS

1 A farmer has two carts. The carts have the same weight, but one has narrow wheels and the other has wide wheels.



narrow wheel



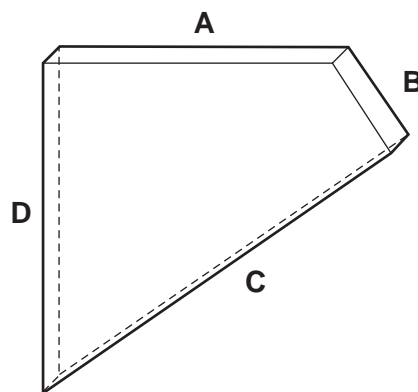
wide wheel

In rainy weather, which cart sinks **less** into soft ground, and why?

	cart wheels	why
A	narrow	greater pressure on the ground
B	narrow	less pressure on the ground
C	wide	greater pressure on the ground
D	wide	less pressure on the ground

2 The diagram shows a thick sheet of glass.

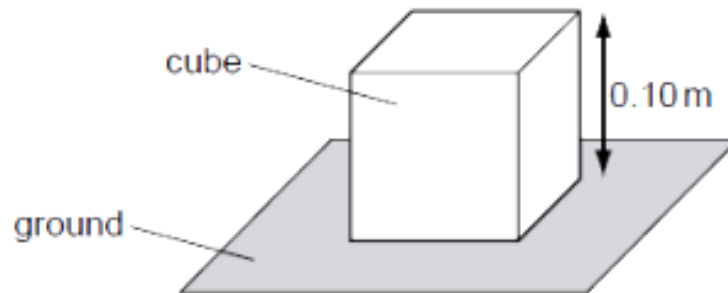
Which edge must it stand on to cause the greatest pressure?



3 The table gives four pairs of values of force and the surface area on which the force acts.
Which pair of values gives the largest pressure on the surface?

	force / N	area / m ²
A	20	2
B	40	2
C	20	4
D	40	4

4 One side of a cube stands on the ground.



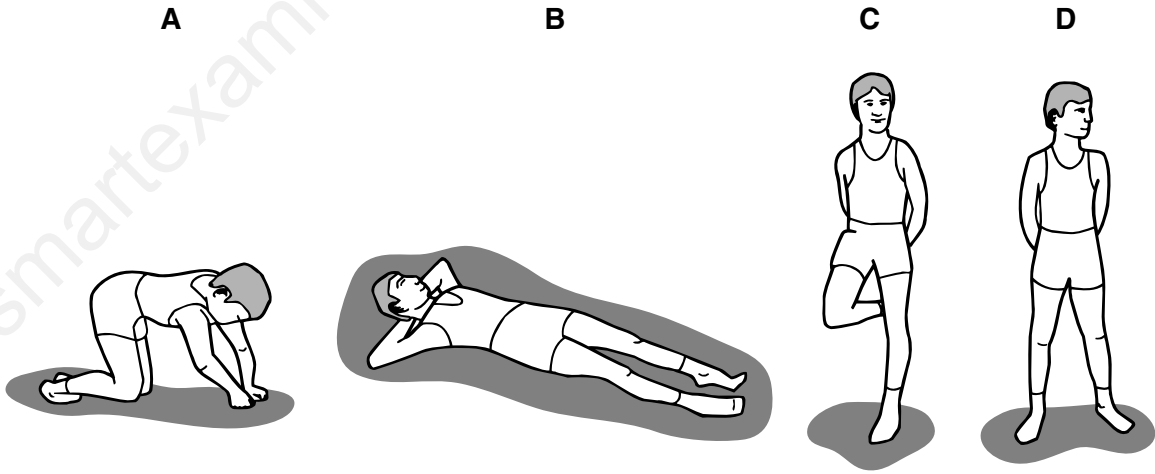
The cube weighs 200 N and its sides are 0.10 m long.

How much pressure does the cube exert on the ground?

- A** 2.0 Pa **B** 20 Pa **C** 2000 Pa **D** 20 000 Pa

5

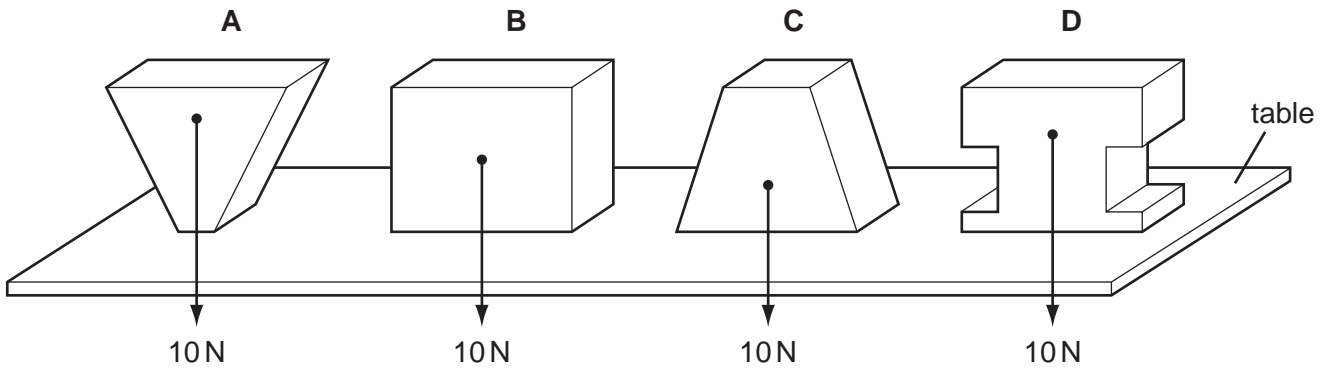
Which diagram shows the child exerting **least** pressure on the ground?



6

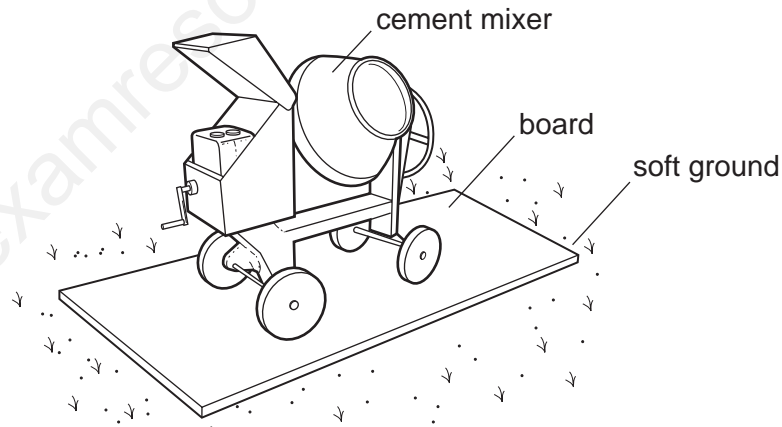
Four blocks, each weighing 10 N, rest on a horizontal table.

Which block applies the greatest pressure on the table?



7

To prevent a cement mixer sinking into soft ground, the mixer is placed on a large flat board.

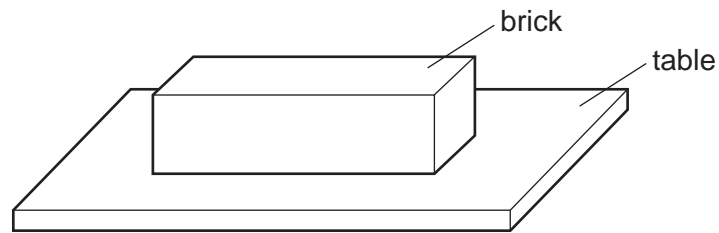


Why does this prevent the mixer sinking?

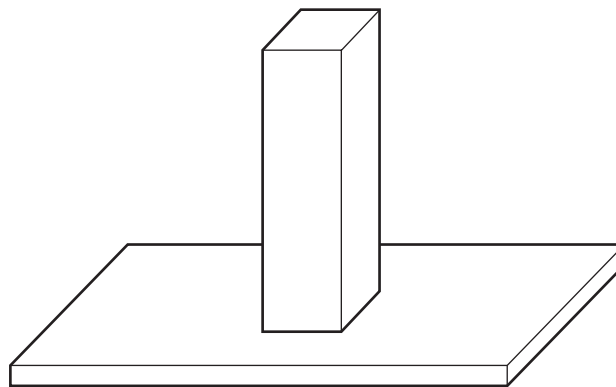
- A The large area decreases the pressure on the ground.
- B The large area increases the pressure on the ground.
- C The large area decreases the weight on the ground.
- D The large area increases the weight on the ground.

8

A brick with rectangular sides rests on a table.



The brick is now turned so that it rests on the table on its smallest face.



How has this change affected the force and the pressure exerted by the brick on the table?

	force	pressure
A	unchanged	unchanged
B	increased	unchanged
C	unchanged	increased
D	increased	increased

9

A gas is trapped in a sealed container of constant volume.

The gas molecules collide with the container walls to produce a pressure.

The temperature of the gas increases. This causes the pressure of the gas to increase.

Which row explains why the pressure increases, in terms of the gas molecules?

	speed of molecules	number of collisions each second
A	increases	increases
B	increases	remains constant
C	remains constant	increases
D	remains constant	remains constant

10

A chair of weight 40 N rests on four legs. Each leg has an area of contact with the floor of 10 cm^2 .

What is the pressure on the floor due to the chair?

- A** 1.0 N/cm^2 **B** 4.0 N/cm^2 **C** 400 N/cm^2 **D** $40\,000 \text{ N/cm}^2$