

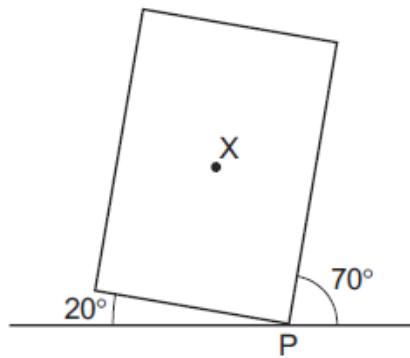
CENTRE OF MASS-SET-2

1

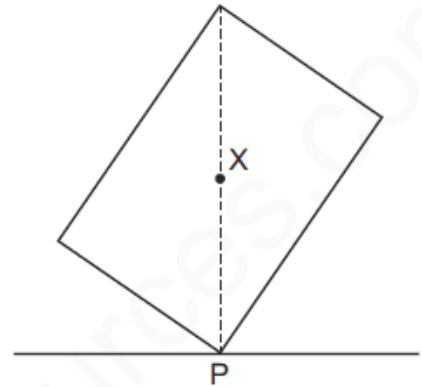
A plane lamina with centre of mass X touches the ground at point P .

Which diagram shows the lamina in equilibrium?

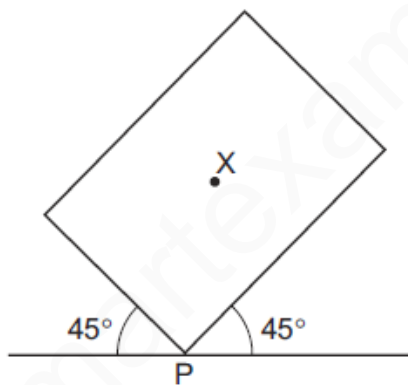
A



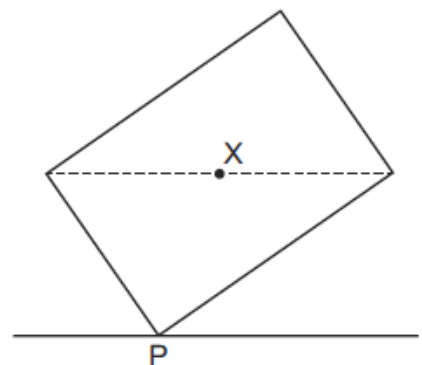
B



C



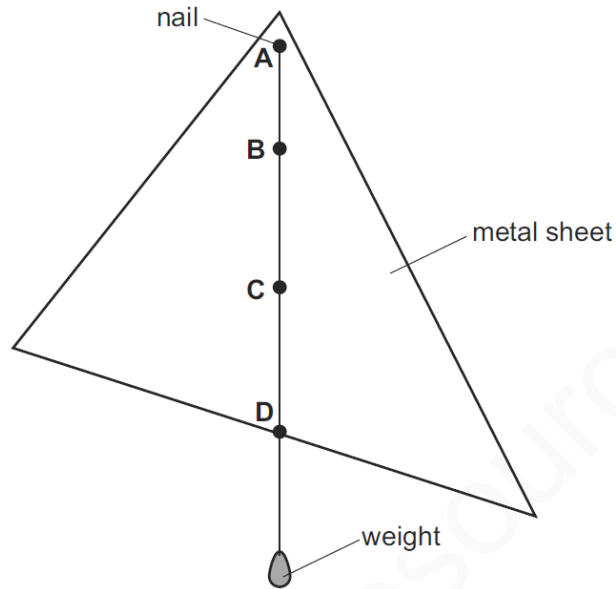
D



2 The diagram shows a uniform, flat metal sheet hanging freely from a nail at point **A**. A weight also hangs freely on a string tied to **A**.

One of the labelled points is at the centre of mass of the metal sheet.

Which point is at the centre of mass?

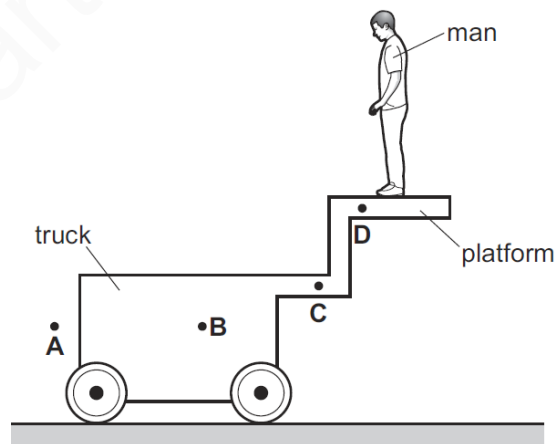


3 A heavy truck on wheels has a platform attached to it.

A man stands on the platform.

The truck does not fall over.

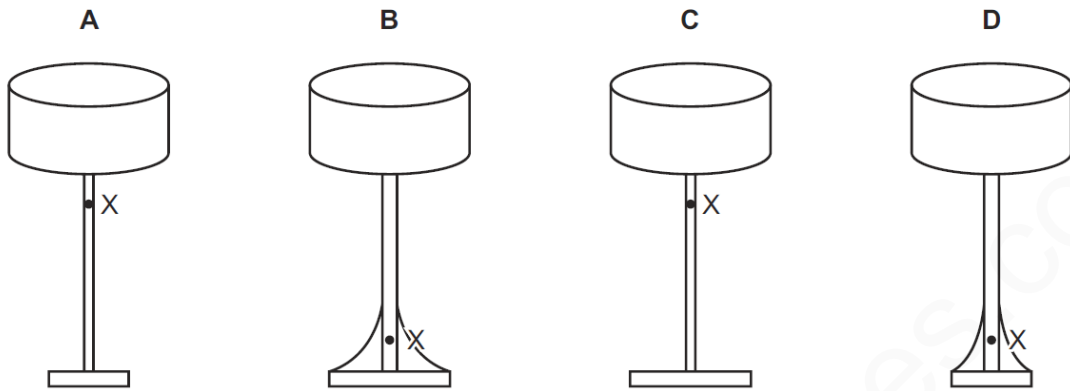
Which position **A**, **B**, **C** or **D** could be the centre of mass of the whole system (truck, platform and man)?



4

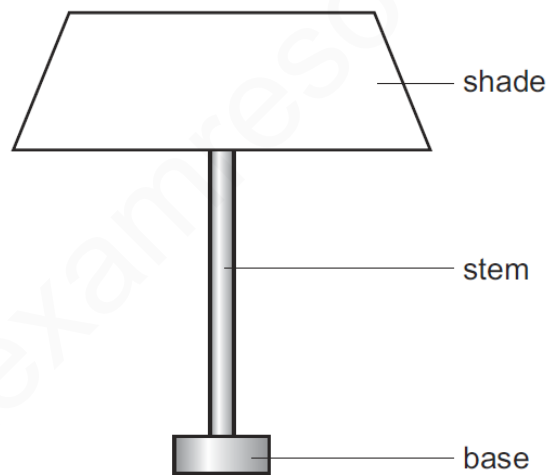
The diagrams show four table lamps resting on a table. The position of the centre of mass of each lamp is labelled X.

Which lamp is the most stable?



5

The lamp in the diagram is not very stable and falls over easily.

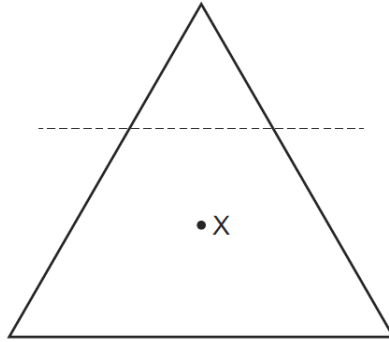


Which row shows changes that would definitely make the lamp more stable?

	base	centre of gravity
A	narrower	higher
B	narrower	lower
C	wider	higher
D	wider	lower

6

Point X is the centre of mass of a lamina in the shape of a triangle with sides of equal length. The top of the triangle is cut off along the dotted line shown.



What happens to the centre of mass, X?

- A** moves towards the bottom of the page
- B** moves to the left
- C** moves to the right
- D** moves towards the top of the page

MS-6

A