

- 12** Two experiments are carried out using two trolleys of equal mass. All moving parts of the trolleys are frictionless, as is the surface that the trolleys move over. In both experiments, trolley X moves towards trolley Y, which is initially stationary.



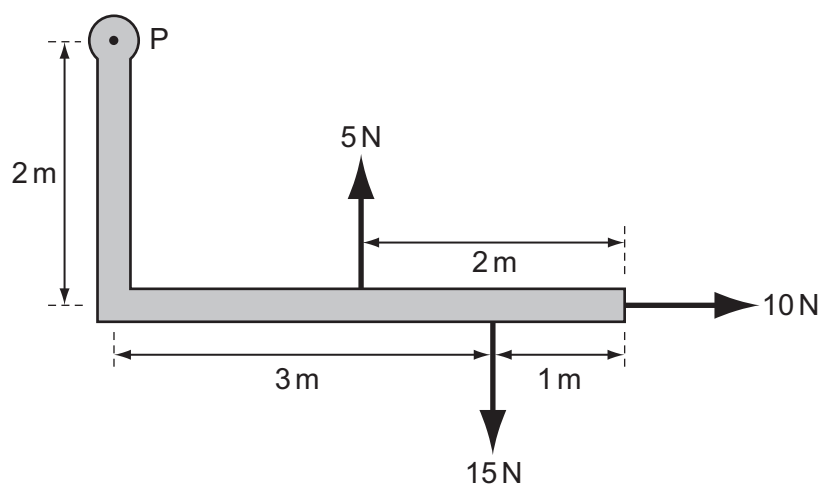
After the collision in experiment 1, X is stationary and Y moves off to the right.

After the collision in experiment 2, the trolleys join and move off together.

What types of collision occur in these experiments?

	experiment 1	experiment 2
<b>A</b>	elastic	elastic
<b>B</b>	elastic	inelastic
<b>C</b>	inelastic	elastic
<b>D</b>	inelastic	inelastic

- 13** A rigid L-shaped lever arm is pivoted at point P.



Three forces act on the lever arm, as shown in the diagram.

What is the magnitude of the resultant moment of these forces about point P?

- A** 15 Nm      **B** 20 Nm      **C** 35 Nm      **D** 75 Nm

**Space for working**