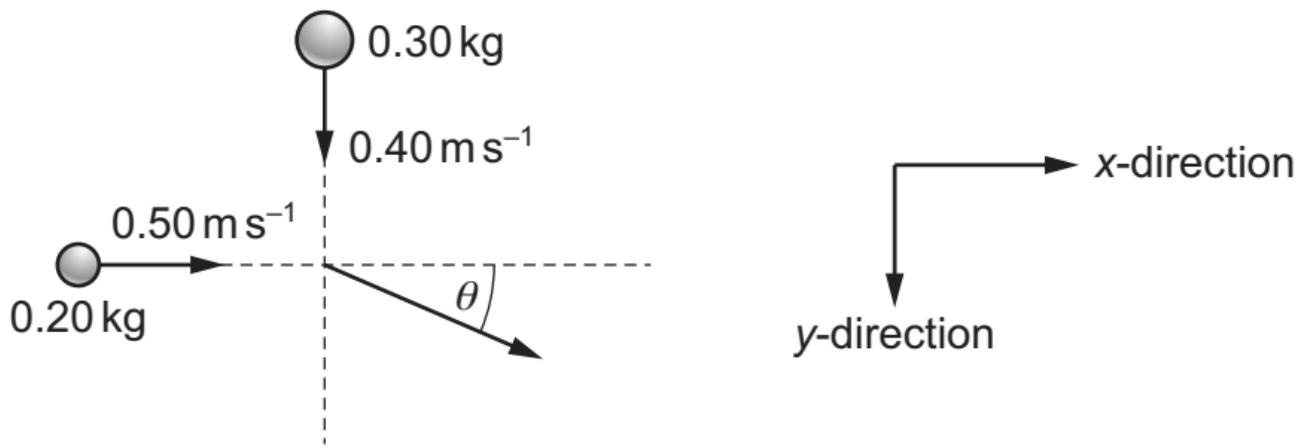


- 9 A ball of mass 0.20 kg, travelling in the  $x$ -direction at a speed of  $0.50 \text{ m s}^{-1}$ , collides with a ball of mass 0.30 kg travelling in the  $y$ -direction at a speed of  $0.40 \text{ m s}^{-1}$ .

The two balls stick together after the collision, travelling at an angle  $\theta$  to the  $x$ -direction.



What is the value of  $\theta$ ?

- A  $39^\circ$       B  $40^\circ$       C  $50^\circ$       D  $51^\circ$

- 10 Four cuboids with identical lengths, breadths and heights are immersed in water. The cuboids are