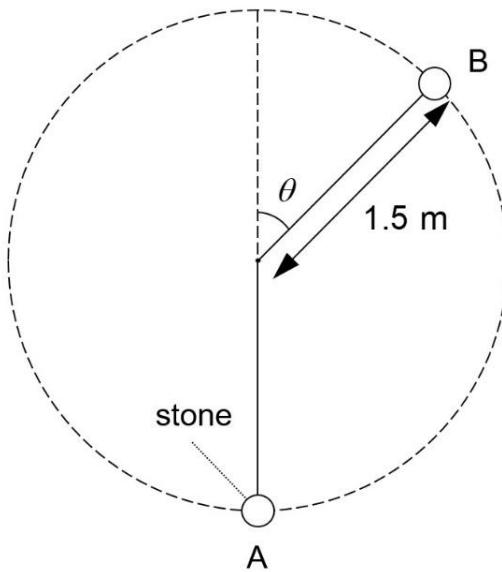


- 9** A stone attached to a light inextensible string at position A is given an initial push to the right. It subsequently moves in a vertical circle of radius 1.5 m and the string just slackens at position B when it makes an angle of  $\theta$  to the vertical.



Given that the velocity of the stone at position B is  $2.2 \text{ m s}^{-1}$ , what is  $\theta$ ?

- A**  $9^\circ$       **B**  $19^\circ$       **C**  $71^\circ$       **D**  $81^\circ$