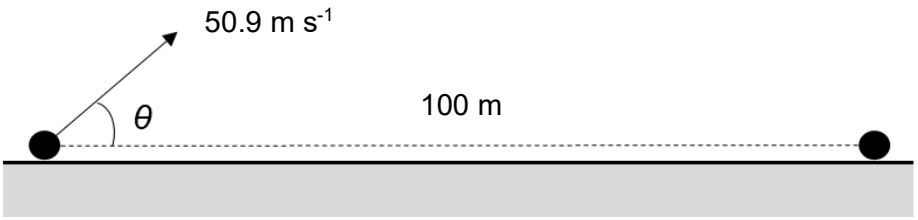
2 An object is launched with a speed of 50.9 m s^{-1} at an angle θ above the horizontal, as shown.



The ground is level. The object lands on the ground 100 m from its initial launch position.

What is the value of the angle θ?

You may need to make use of the double angle formula: $\sin(2\theta) = 2\sin\theta\cos\theta$

A 2.8° **B** 5.5° **C** 11° **D** 79°