Question 1

(4 marks)

In a stunt at the opening of a football game, a passenger in a helicopter drops a football so that it lands in the centre of the football field. The helicopter is descending toward the ground at a constant velocity of 3.40 m s^{-1} when the football is released. The football takes 6.70 s to reach the ground. Assuming no air resistance, calculate the height in metres of the helicopter at the moment the football was released.