

13. One of Robin Hood's merry men, perched in the top of a tree, shoots an arrow from a height of 18 meters. If air resistance can be neglected and the arrow lands on the horizontal ground below with a velocity of 55 m/s at an angle of  $25^\circ$  to the horizontal, what was the initial velocity of the arrow?

A. 9.8 m/s, straight down

B. 24 m/s at  $56^\circ$  with respect to the horizontal

C. 52 m/s at  $15^\circ$  with respect to the horizontal

D. 17 m/s at  $32^\circ$  with respect to the horizontal

E. 33 m/s at  $2^\circ$  with respect to the horizontal

F. Not close to any of the above

Ans. \_\_\_\_\_