Worksheet 2.1
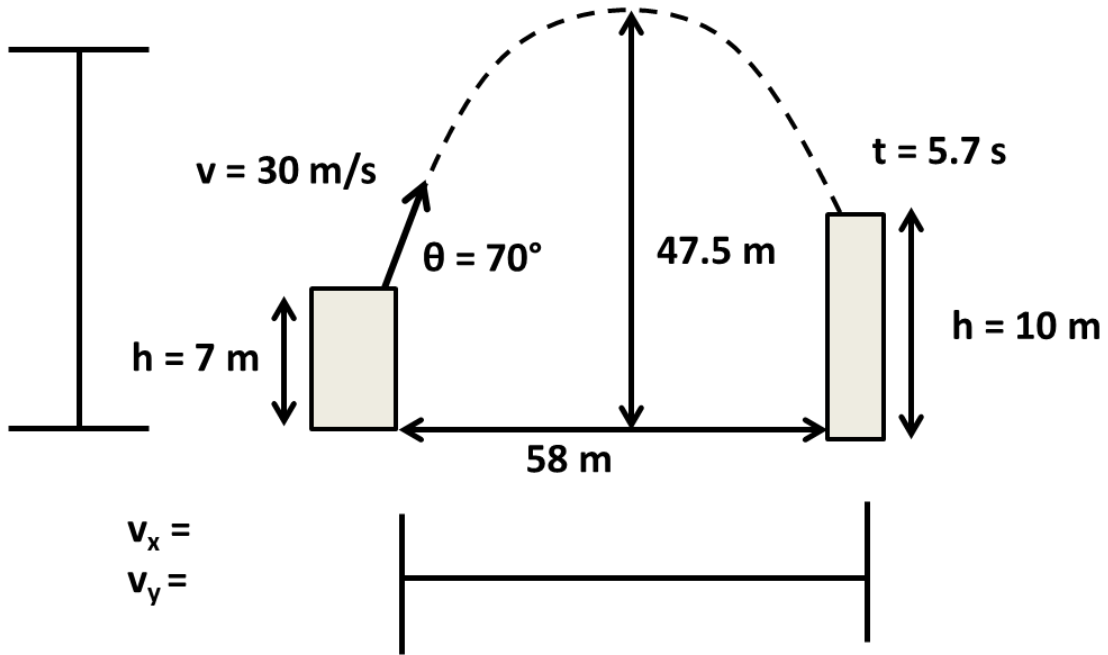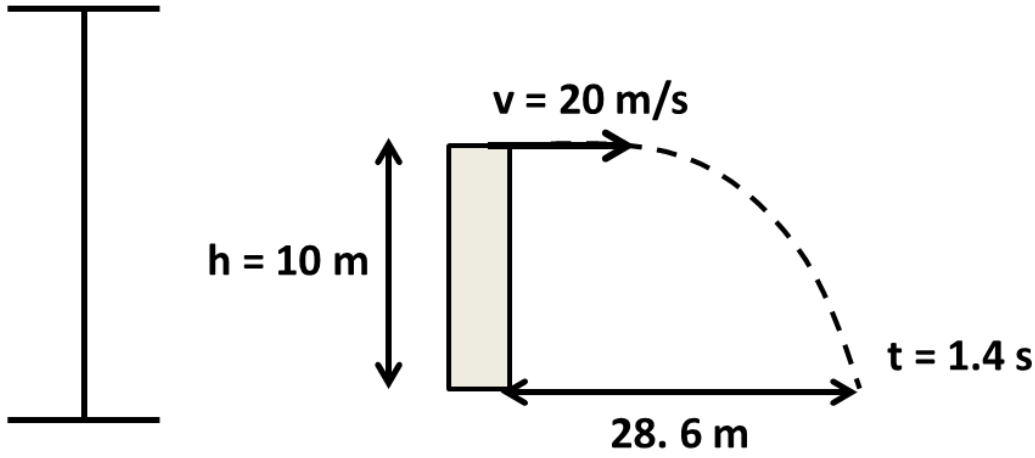
For each diagram below, calculate the v_x and v_y and draw the motion diagrams in the y and x-directions.

v = 30 m/s

$\theta = 70°$

t = 5.7 s

47.5 m

h = 7 m

h = 10 m

58 m

$v_x =$
$v_y =$

v = 10 m/s

3 m

$\theta = 50°$

t = 1.4 s

h = 1 m

9.1 m

$v_x =$
$v_y =$

v = 20 m/s

h = 10 m

t = 1.4 s

28. 6 m

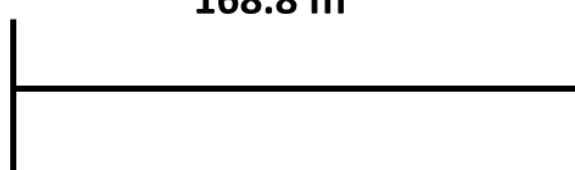$v_x =$
$v_y =$

v = 40 m/s

θ = 50°

58 m

h = 10 m

t = 6.6 s

168.8 m
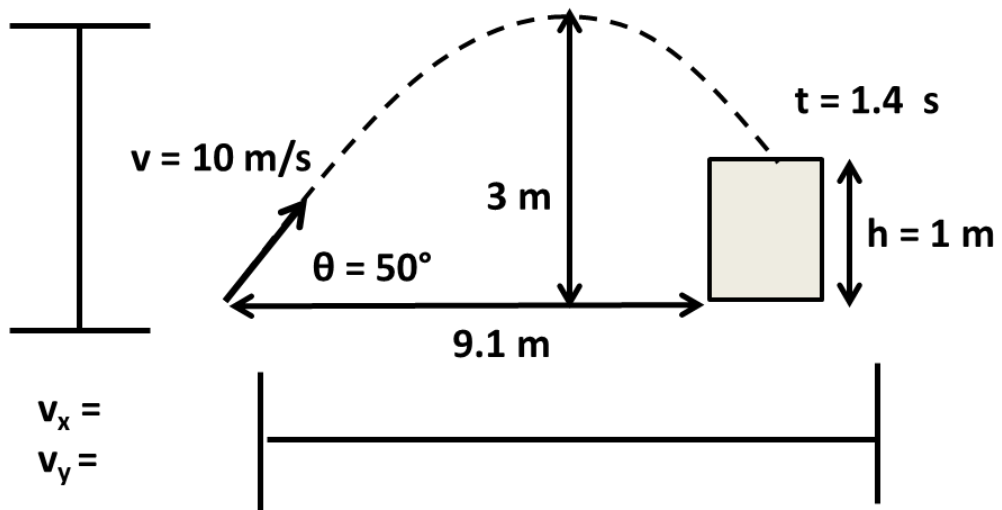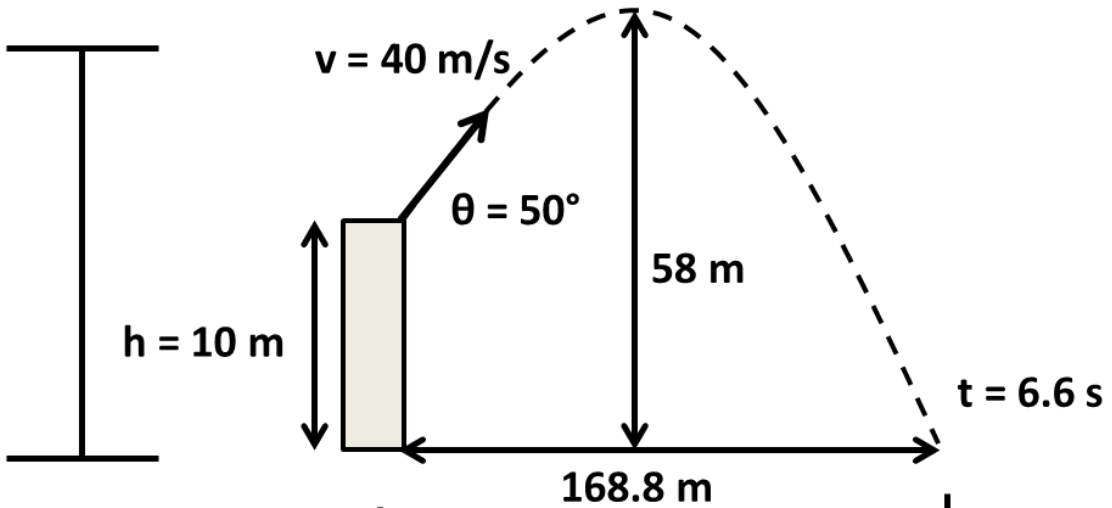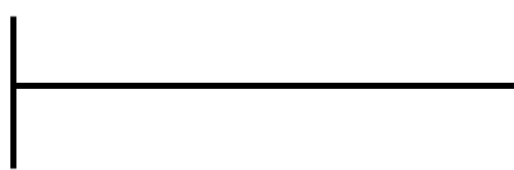
$v_x =$
$v_y =$

For the two sets of motion diagrams below, draw and label the matching projectile diagram (like those above).

0 m/s

28 m —— t= 0 s

-9.8 m/s²

0 m

t= 2.4 s

t= 0 s

x=0 m   9.6 m

4 m/s

0 m/s

14 m

-9.8 m/s²

12 m/s

0 m

t= 0 s   t= 2.45 s

t= 0 s

0 m   47.6 m

19.4 m/s