

# UNIT III WORKSHEET 1

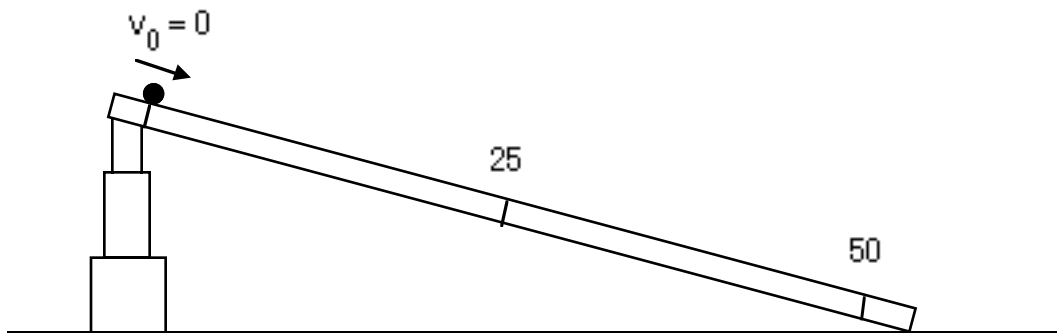
When evaluating problems 1 - 3, please represent the motion that would result from the rail configuration indicated by means of a:

- A) qualitative graphical representation of  $x$  vs.  $t$
- B) qualitative graphical representation of  $v$  vs.  $t$
- C) qualitative graphical representation of  $a$  vs.  $t$

**remember to label the axes of each graph**

- D) qualitative motion map
- E) general mathematical expression of the relationship between  $x$  and  $t$
- F) general mathematical expression of the relationship between  $v$  and  $t$
- G) general mathematical expression of the relationship between  $a$  and  $t$

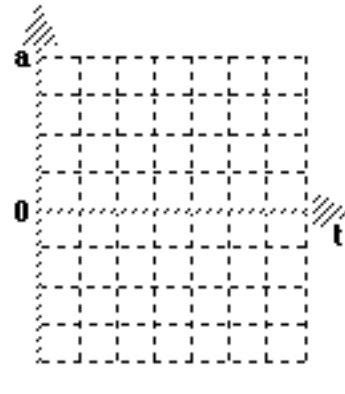
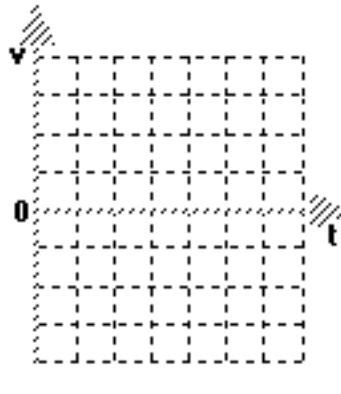
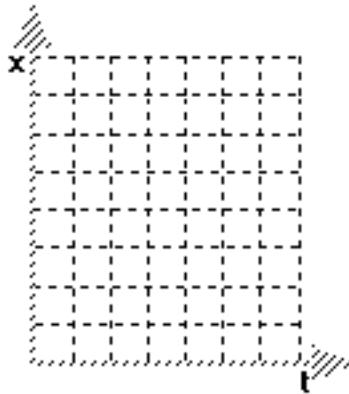
1.



(A)

(B)

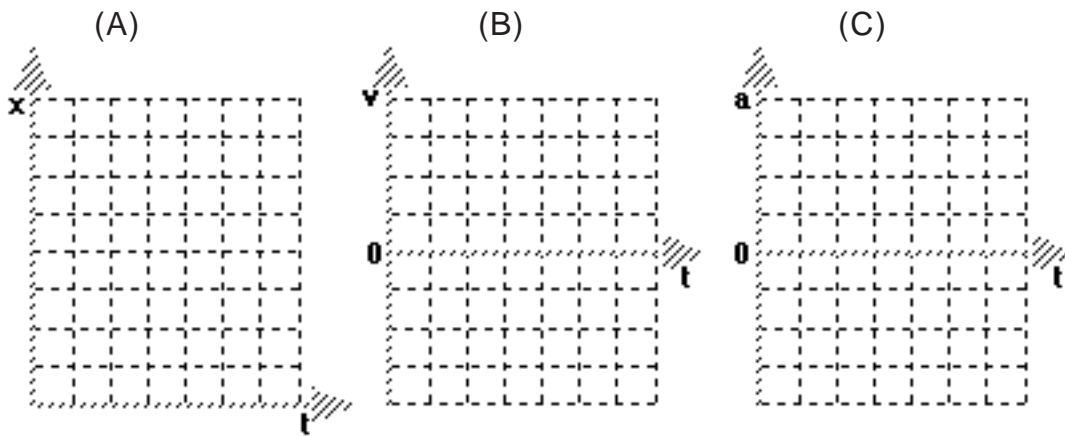
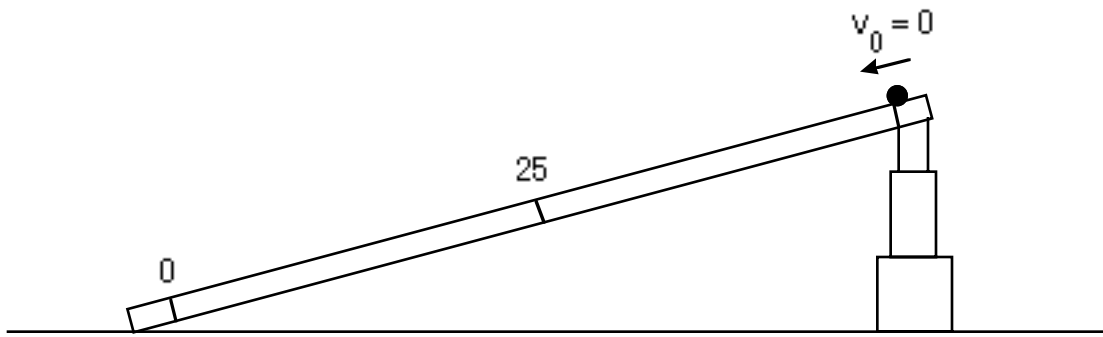
(C)



(D)

(E) \_\_\_\_\_ (F) \_\_\_\_\_ (G) \_\_\_\_\_

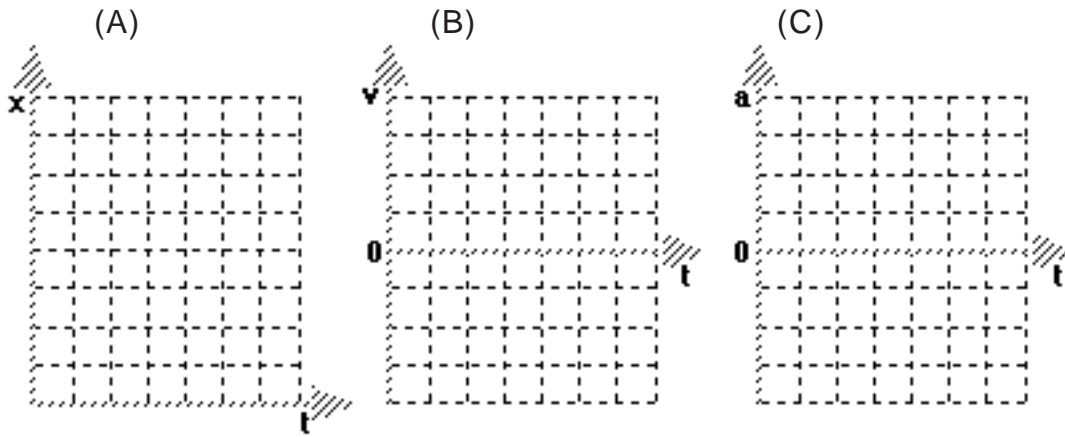
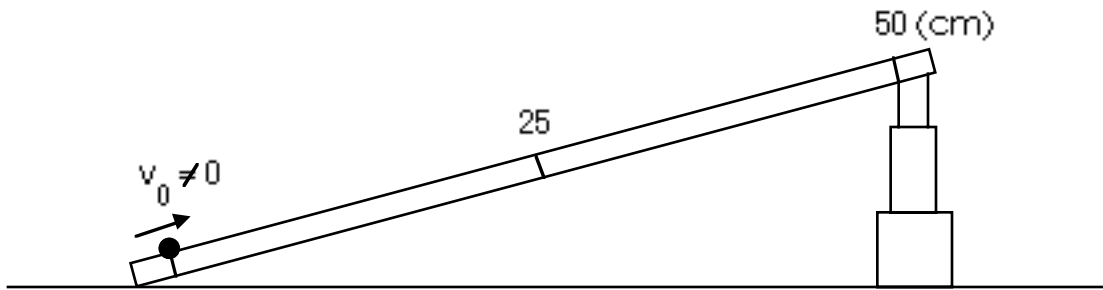
2.



(D)

(E) \_\_\_\_\_ (F) \_\_\_\_\_ (G) \_\_\_\_\_

3.



(D)

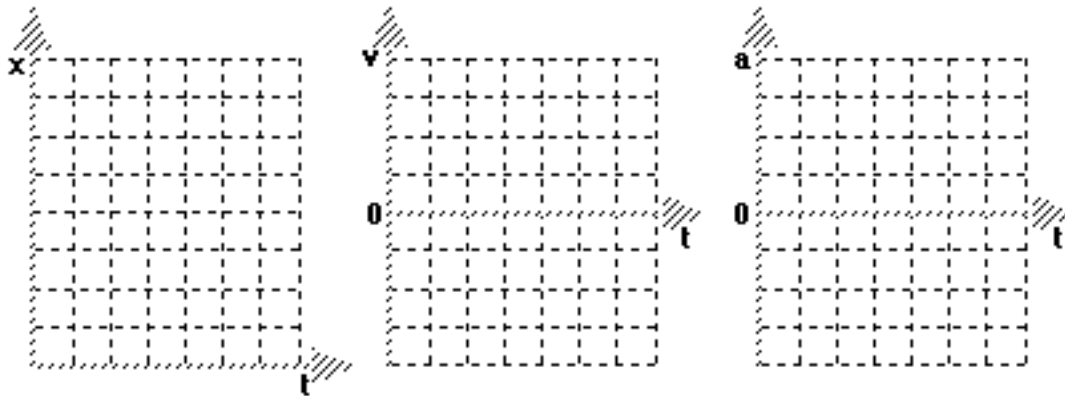
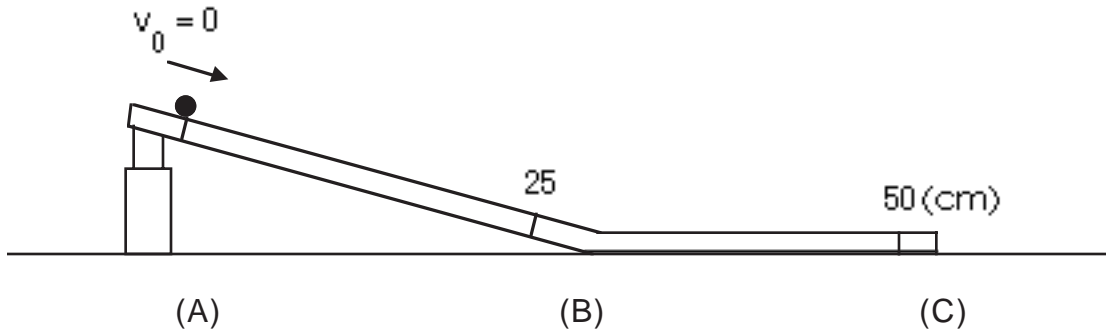
(E) \_\_\_\_\_ (F) \_\_\_\_\_ (G) \_\_\_\_\_

When considering problems 4-5, assume that the ball does not experience any change in velocity while it is on a horizontal portion of the rail.

Please represent the motion that would result from the rail configuration indicated by means of a:

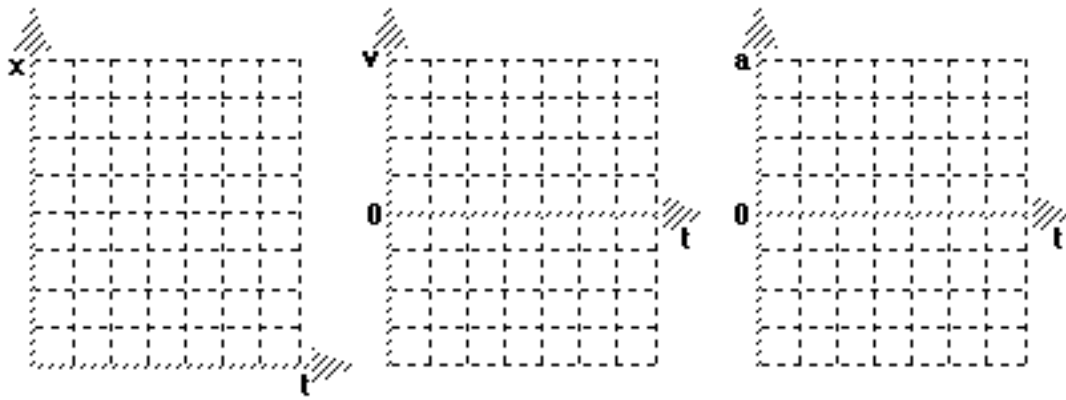
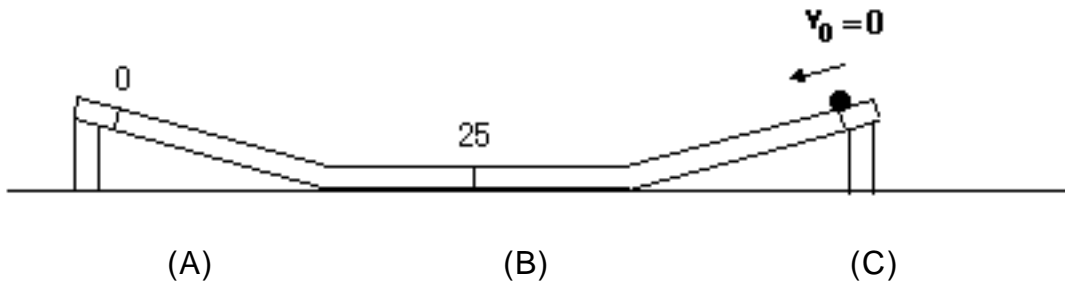
- A) qualitative graphical representation of  $x$  vs.  $t$
  - B) qualitative graphical representation of  $v$  vs.  $t$
  - C) qualitative graphical representation of  $a$  vs.  $t$
- remember to label the axes of each graph**
- D) qualitative motion map

4.



(D)

5.



(D)