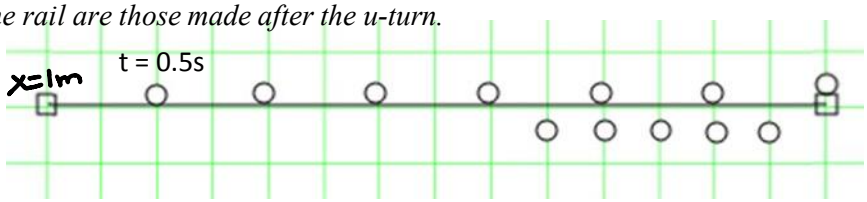
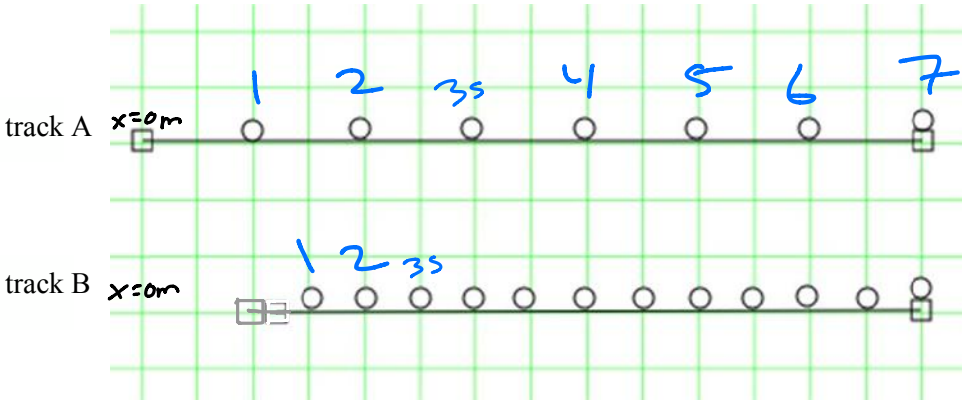
Worksheet 1.1a

1. The following tracks are taken in 0.5 s intervals. Take the first track to have a clock reading of 0.5 s. At the end of the rail the object makes a u-turn. Each square represents 1 m.
The tracks below the rail are those made after the u-turn.



a. Describe the motion of the object. constant v before the uturn & after. faster before the turn
b. What is the distance traveled for the object? 19m
c. What is the object's displacement? 9m
d. What is the object's starting position? x = 1m
e. What is the object's position at a clock reading of 4 s? at 2 s? x=14m, x=9m
f. How long does it take the object to change its position from 3 m to 9 m? t_i=.5s t_f=2s
Δt=1.5s

2. *The following are track of two objects that are side by side on different rails. The tracks are taken in 1-s intervals. Take the first track of each to have a clock reading of 1 s. Each square represents 1 meter.*



a. Describe the motion of object A and B. constant v's, w/ A moving faster than B.
b. How far did B travel in 4 s? 4m
c. How long did it take A to travel 2 m? 1 s
d. Which ball is ahead after 3 s? A
c. Which object reached the end of the track first? A
e. What is the position of each object after they have traveled for 4 s? A=8m, B=6m
f. Are they ever at the same position at the same time? @ 2s, x=4m for both