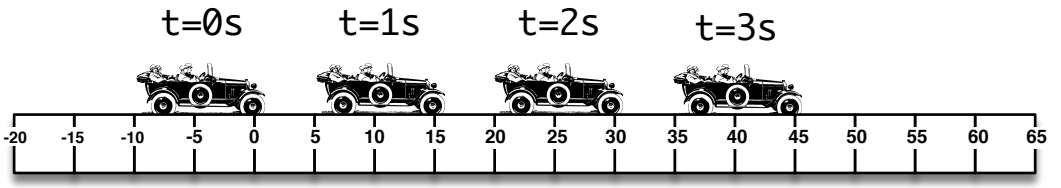
Final Exam Review - Motion Basics

Names: Anne Sirs

Track the FRONT of the object - fill in the data table, and determine the velocitys.
Predict where the object will be at t = 4 s.



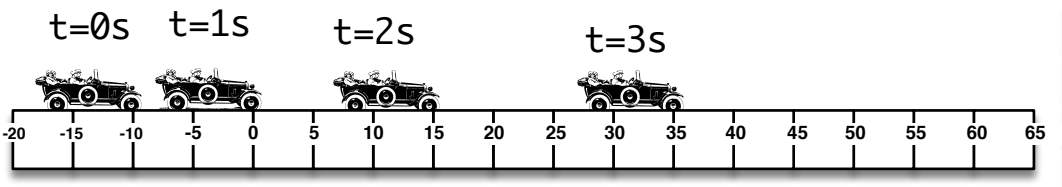
Appears to be:
- ☐ speeding up
- ☐ Slowing down
- ☒ Constant velocity

Acceleration = 0

Confirmed to be:
- ☐ speeding up
- ☐ Slowing down
- ☒ Constant velocity

t (s)	x (m)
0	0
1	15
2	30
3	45
4	60

v (m/s)
15
15
15
15



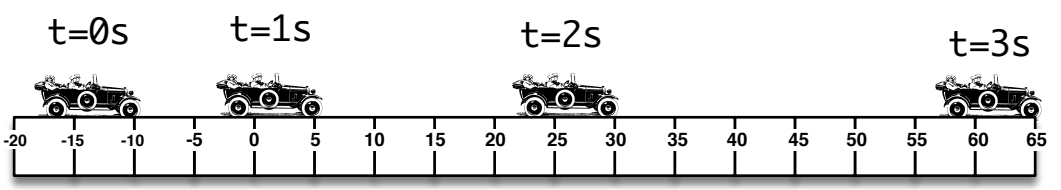
Appears to be:
- ☒ speeding up
- ☐ Slowing down
- ☐ Constant velocity

Acceleration = +5 m/s/s

Confirmed to be:
- ☒ speeding up
- ☐ Slowing down
- ☐ Constant velocity

t (s)	x (m)
0	-10
1	0
2	15
3	35
4	60

v (m/s)
10
15
20
25



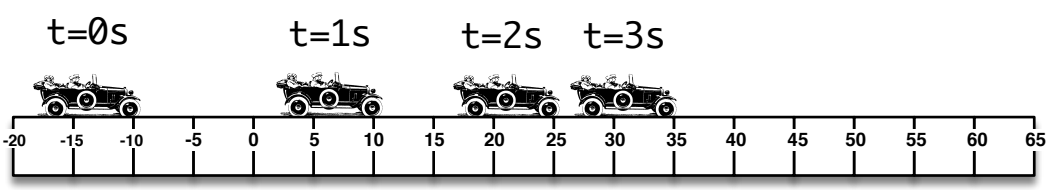
Appears to be:
- ☒ speeding up
- ☐ Slowing down
- ☐ Constant velocity

Acceleration = +10 m/s/s

Confirmed to be:
- ☒ speeding up
- ☐ Slowing down
- ☐ Constant velocity

t (s)	x (m)
0	-10
1	5
2	30
3	65
4	110

v (m/s)
15
25
35
45



Appears to be:
- ☐ speeding up
- ☒ Slowing down
- ☐ Constant velocity

Acceleration = -5 m/s/s

Confirmed to be:
- ☐ speeding up
- ☒ Slowing down
- ☐ Constant velocity

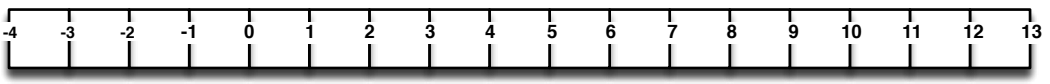
t (s)	x (m)
0	-10
1	10
2	25
3	35
4	40

v (m/s)
20
15
10
5

Fill in the Missing Info

Track the FRONT of the object. Assuming the acceleration is constant, fill in the blanks, and draw the person at the other times.

t=0s

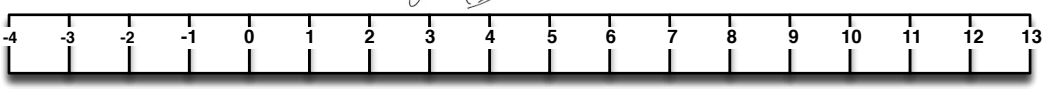


Their acceleration is 1 m/s/s.

t (s)	x (m)
0	-2
1	2
2	7
3	13

v (m/s)
4
5
6

t=2s

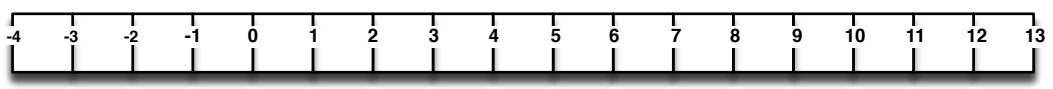


They're running at a constant velocity.

t (s)	x (m)
0	0
1	2
2	4
3	6

v (m/s)
2
2
2

t=0s

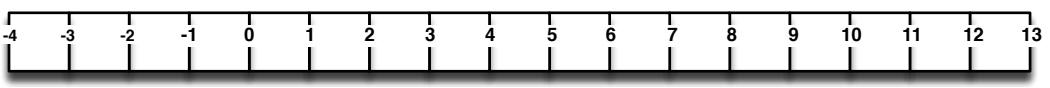


Their acceleration is 3 m/s/s.

t (s)	x (m)
0	-3
1	-2
2	2
3	9

v (m/s)
1
4
7

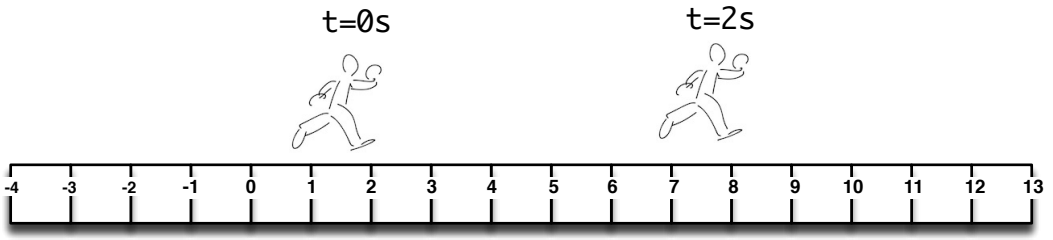
t=1s



Their acceleration is -3 **m/s/s.**

t (s)	x (m)
0	-3
1	4
2	8
3	9

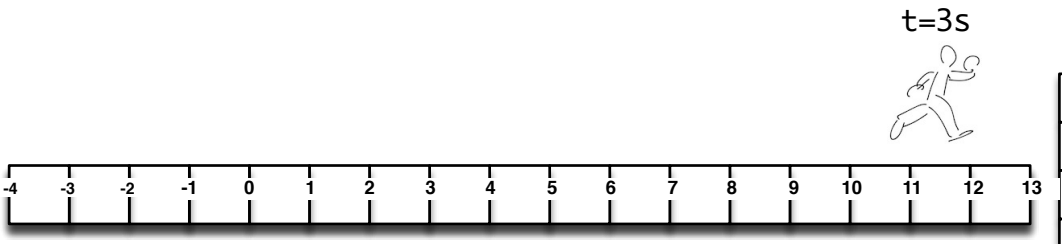
v (m/s)
7
4
1



They're running at a constant velocity.

t (s)	x (m)
0	2
1	5
2	8
3	11

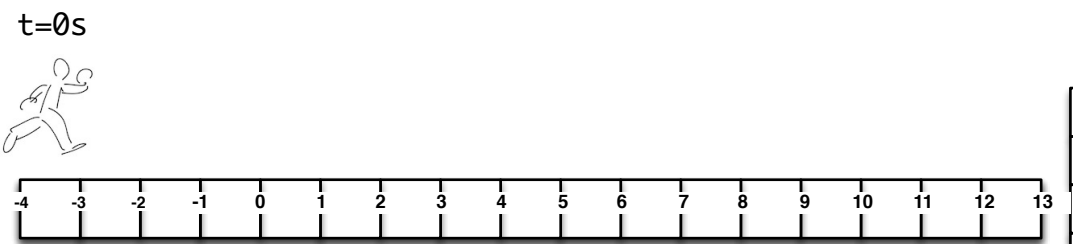
v (m/s)
3
3
3



Their acceleration is 3 m/s/s.

t (s)	x (m)
0	0
1	1
2	5
3	12

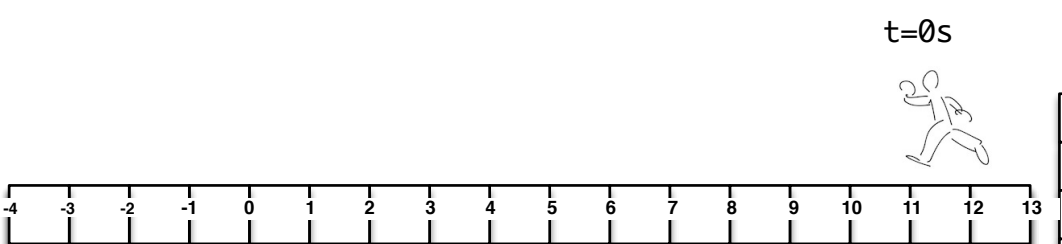
v (m/s)
1
4
7



Their acceleration is -1 m/s/s.

t (s)	x (m)
0	-3
1	3
2	8
3	12

v (m/s)
6
5
4

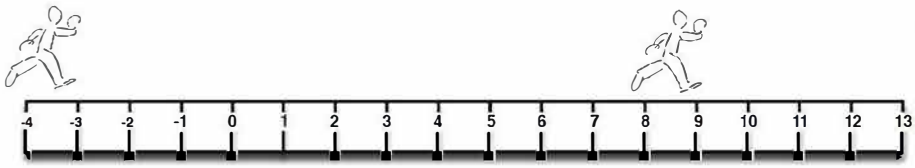


Their acceleration is +1 m/s/s.

t (s)	x (m)
0	11
1	6
2	2
3	-1

v (m/s)
-5
-4
-3

t=0s t=3s

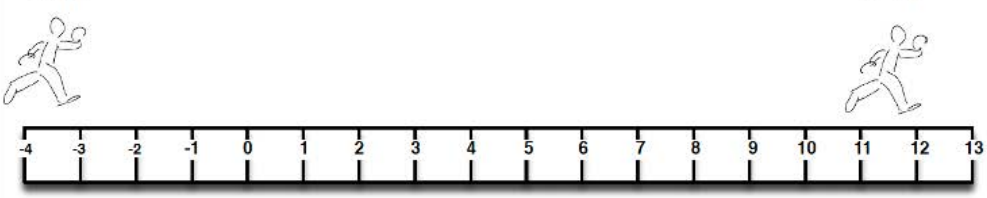


t (s)	x (m)
0	-3
1	-2
2	2
3	9

v (m/s)
1
4
7

Their acceleration is 3 m/s/s.

t=0s t=3s



t (s)	x (m)
0	-3
1	3
2	8
3	12

v (m/s)
6
5
4

Their acceleration is -1 m/s/s.