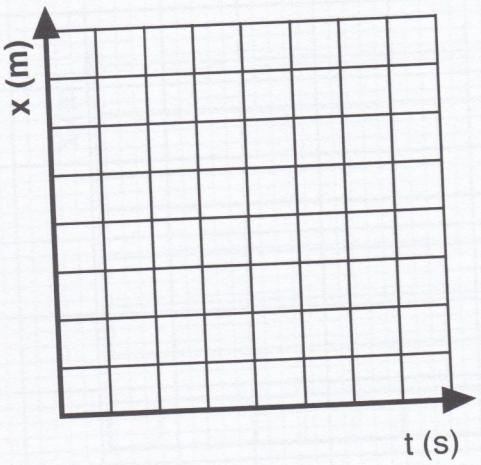
3. Suppose now that our skater was observed in a third trial. The following data were obtained:

t (s)	x (m)
0.0	0.0
2.0	2.0
4.0	4.0
6.0	4.0
8.0	3.0
10.0	2.0
12.0	2.0
14.0	5.0
16.0	8.0



a. Plot the position vs. time graph for the skater.

b. What do you think is happening during the time interval: t = 4s to t = 6s? How do you know?

c. What do you think is happening during the time interval: t = 6s to t = 10s? How do you know?

d. Determine the skater's average **velocity** from t = 0s to t = 16s. (Average **velocity** is the displacement (final position minus initial position) divided by time elapsed.)

e. Determine the skater's average **speed** from t = 0s to t = 16s. (Average **speed** path length divided by time elapsed.)

4a. In what situation might average **speed** be a better measure of motion than average velocity?

4b. In what situation might average **velocity** be a better measure of motion than average speed?