UNIT II: Worksheet 3

1. A skater skates down a sidewalk. A friend collects the following data.

t (s)	x (m)
0.0	0.0
2.0	6.0
4.0	12.0
6.0	12.0
8.0	8.0
10.0	4.0
12.0	0.0
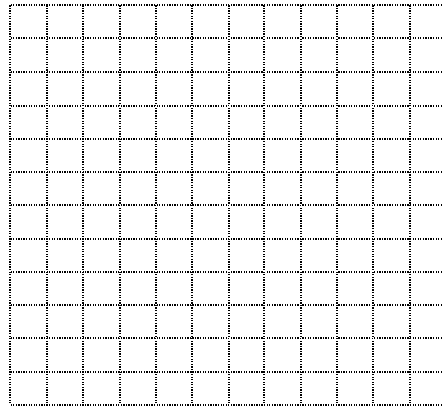
a.   Plot the position vs. time graph for the skater.

b.   What **distance** does the skater travel from t = 0s to t = 12s.

c.   Determine the skater's average **speed** from t = 0s to t = 12s.

d.   What is the skaters **displacement** from t = 0s to t = 12s.

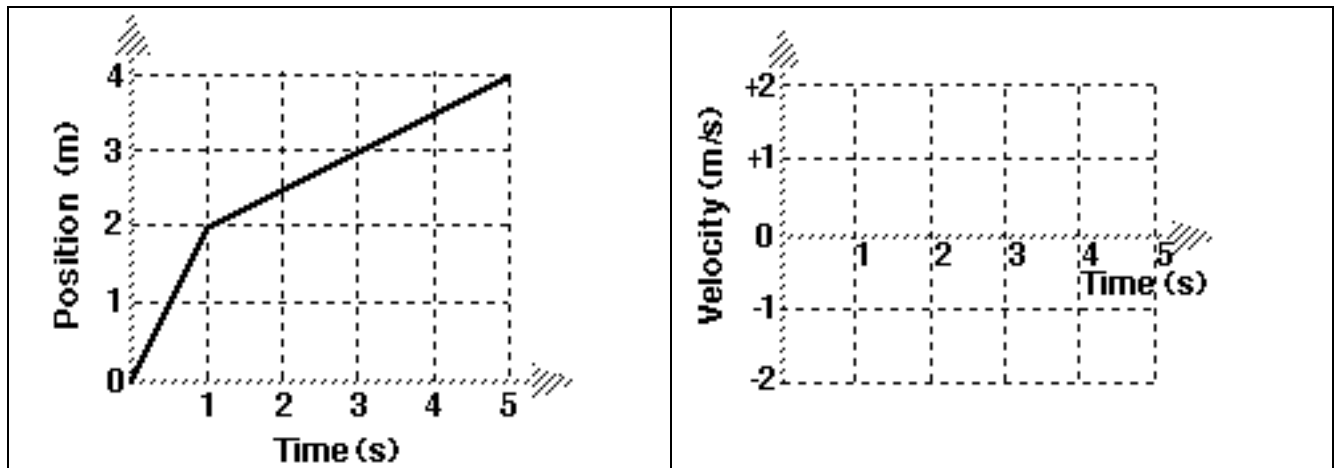e.   Determine the skater's average **velocity** from t = 0s to t = 12s.
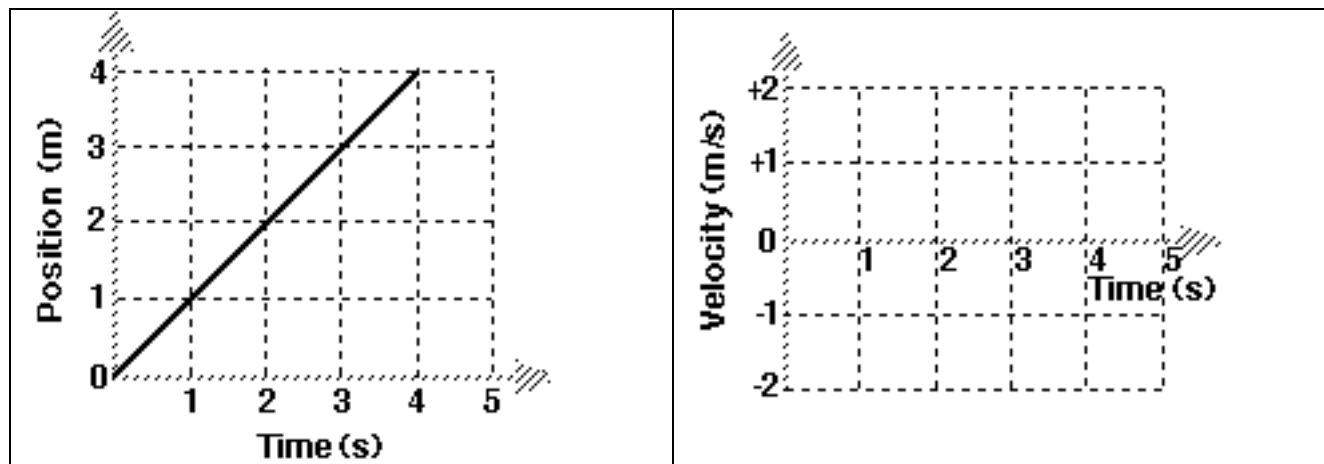
a. Draw the velocity vs time graphs for an object whose motion produced the position vs time graphs shown above at left. Show calculations of velocity below.

b. Describe the motion of the object.

c. Using the velocity-time graph, graphically represent the displacement for t=0 to t=4 seconds.

d. Using the velocity-time graph, what is the displacement of the object?

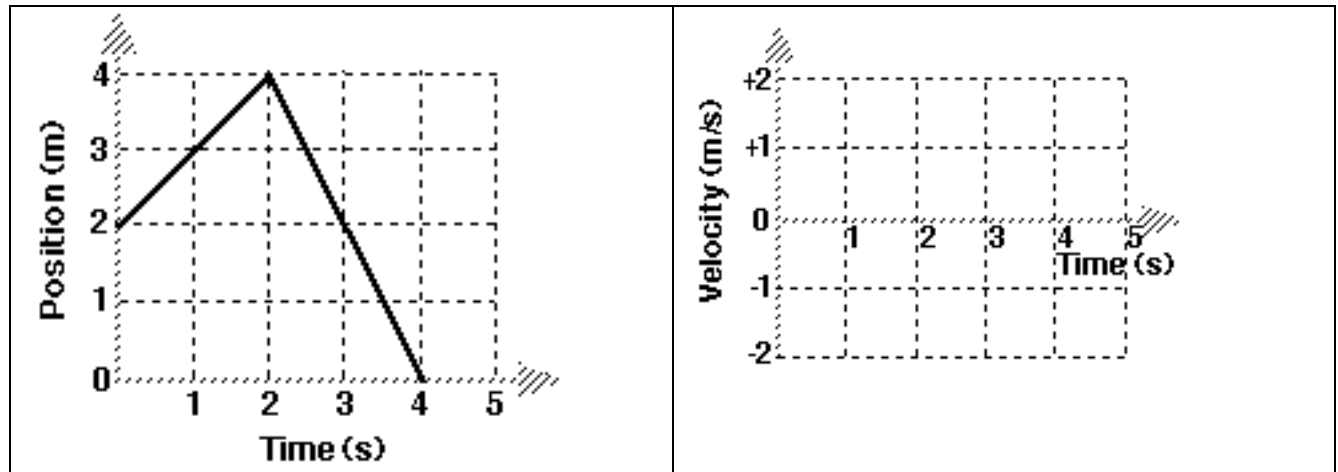e. Using the position-time graph, what is the displacement of the object?

a. Draw the velocity vs time graphs for an object whose motion produced the position vs time graphs shown above at left. Show calculations of velocity below.

b. Describe the motion of the object.

c. Using the velocity-time graph, graphically represent the displacement for t=0 to t=1 seconds and t=1 to t=5 seconds.

d. Using the velocity-time graph, what is the displacement of the object over the each time interval? What is the <u>total</u> displacement?

e. Using the position-time graph, what is the displacement of the object over the each time interval? What is the <u>total</u> displacement?

a. Draw the velocity vs time graphs for an object whose motion produced the position vs time graphs shown above at left. Show calculations of velocity below.

b. Describe the motion of the object.

c. Using the velocity-time graph, graphically represent the displacement for t=0 to t=2 seconds and t=2 to t=4 seconds.

d. Using the velocity-time graph, what is the displacement of the object over the each time interval? What is the total displacement?

e. Using the position-time graph, what is the displacement of the object over the each time interval? What is the total displacement?