Science 1206: Motion

Worksheet #3: Plotting Graphs and Using them to find Other Information

PART 1: Graph each of the following sets of data and then draw a line of best fit. Remember to label all axes and to include a title. Use the grid provided for each.

(a)

time (s)	0	1	2	3	4	5
distance (m)	0	2	3	5	6	7

(c)

t(s)	0	10	20	30	40
d(m)	0	0.5	1.0	1.5	2.0

(b)

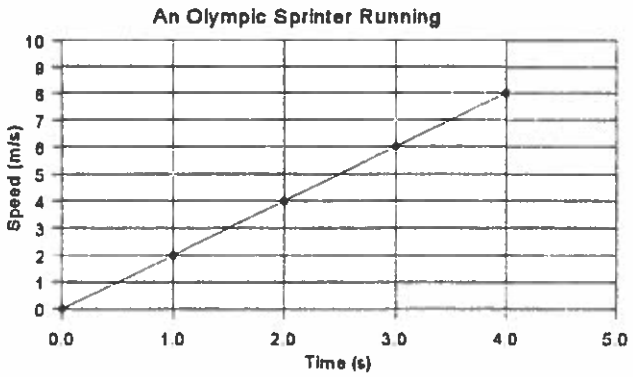
time (s)	0	30	60	90	120	150
speed (m/s)	0	5	6	8	9	11

(d)

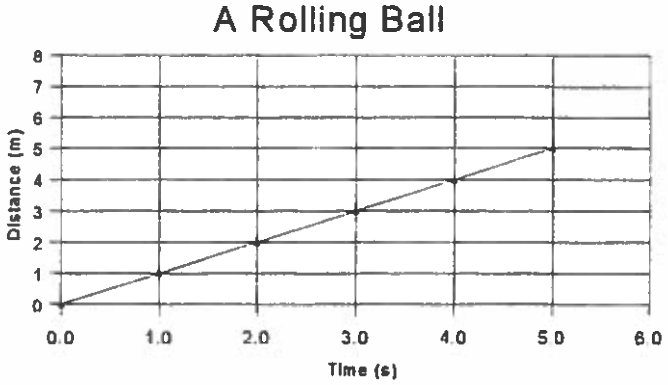
t(s)	0	5	10	15	20
v(m/s)	0	10	80	270	640

PART 2: For each of the graphs given below, interpolate or extrapolate as necessary to answer the questions.

a. (1) What is the runner's speed at 2 s?
(2) What is the runner's speed at 3.5 s?
(3) What is the runner's speed at 4.5 s ?



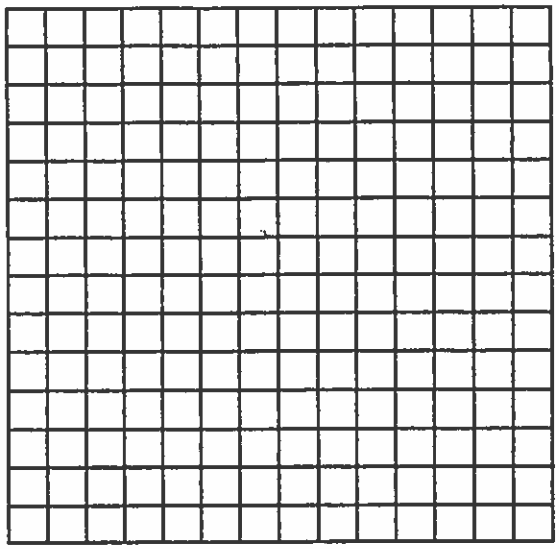
b. (1) How far has the ball rolled after 1.5 s?
(2) How far has the ball rolled after 3.5 s?
(3) How far has the ball rolled after 6 s?



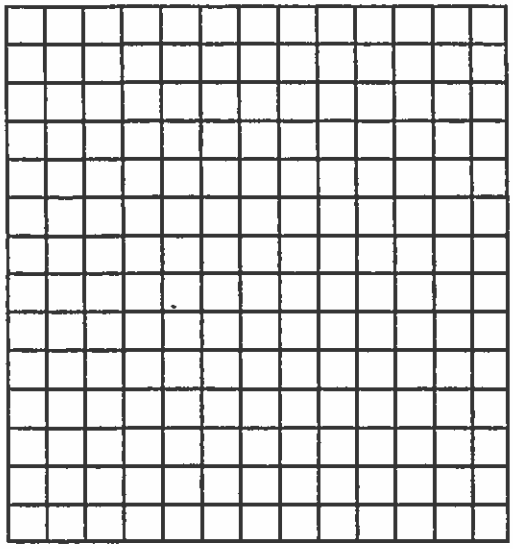
PART 3: For each of the graphs in Part 1, calculate the slope of the line of best fit. Remember to show all calculations.

Science 1206
Graph Paper for Worksheet #3

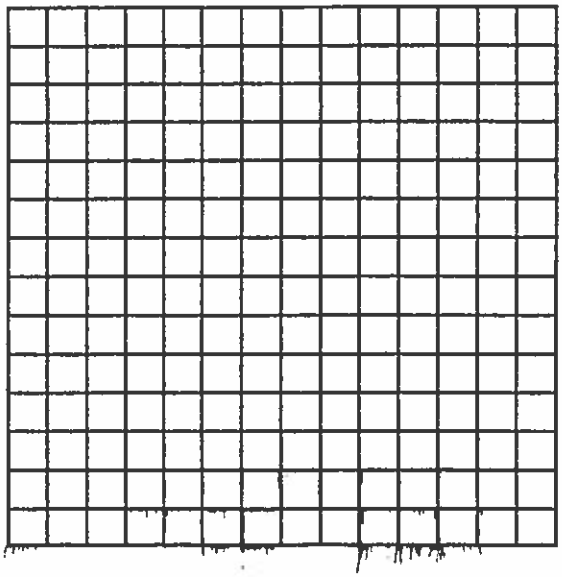
a.



b.



c.



d.