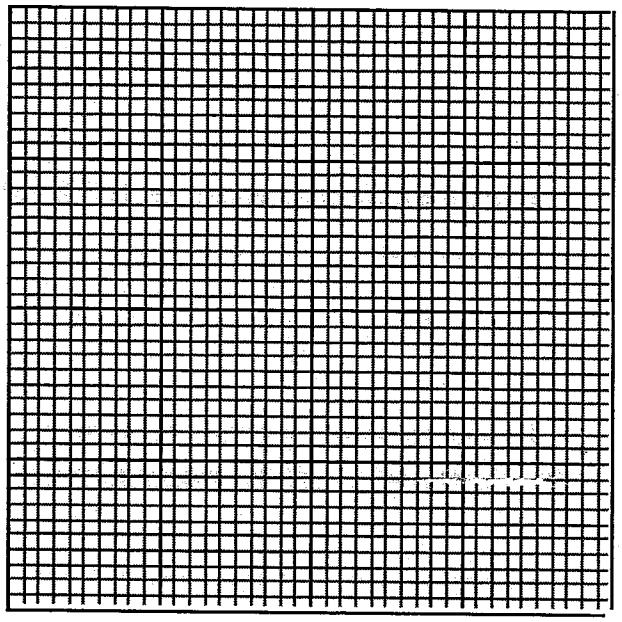
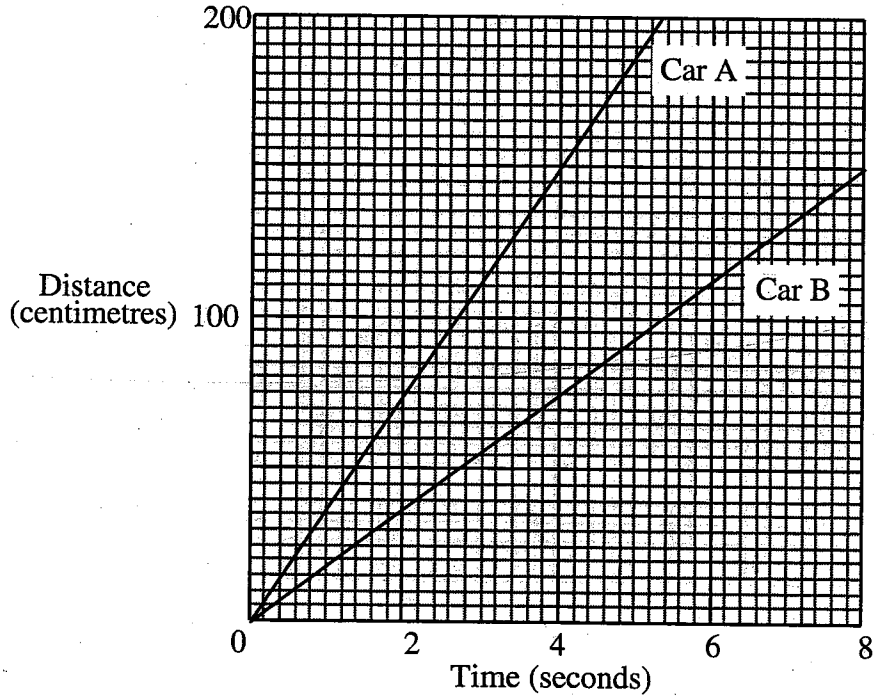
2. Plot the following graph. Time is the manipulated variable.

Time (s)	Distance (cm)
0.0	0.0
1.0	5.0
2.0	10.0
3.0	15.0
4.0	20.0



3. Two toy cars, A and B, are propelled by a small electric motor. Distance traveled versus elapsed time is plotted on graph as shown below. Answer the questions that follow.

Distance versus Time for Cars A and B



a) After 4 seconds have elapsed:

(i) What distance has car A covered?

_____

(ii) What distance has car B covered?

_____

b) Is there a relationship between steepness of the line and the distance covered per unit of time?

_____

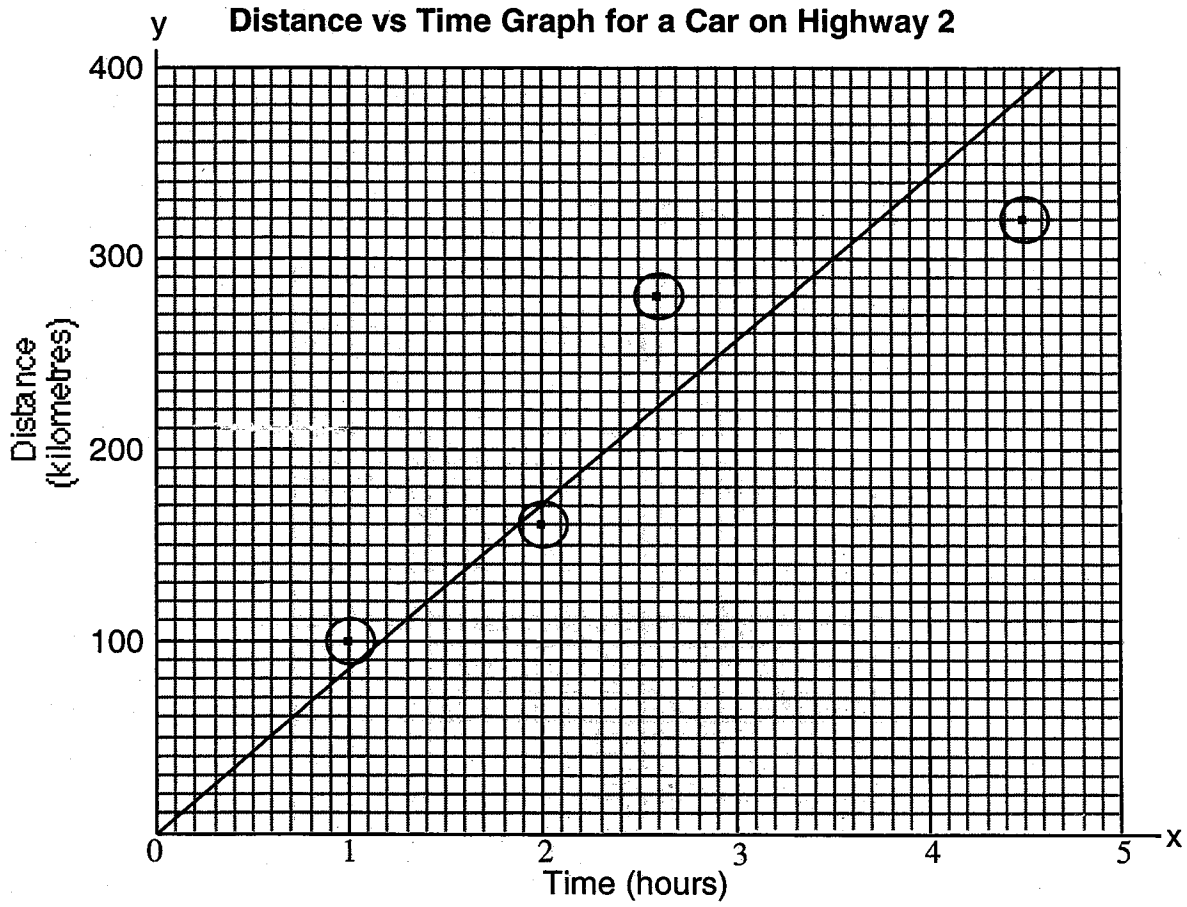
c) How much distance is covered per second by car A?

_____

d) How much distance is covered per second by car B?

_____

4. Examine the graph below and answer the questions that follow.



b) Give three requirements for a straight best-fit line.

(i) _____

_____

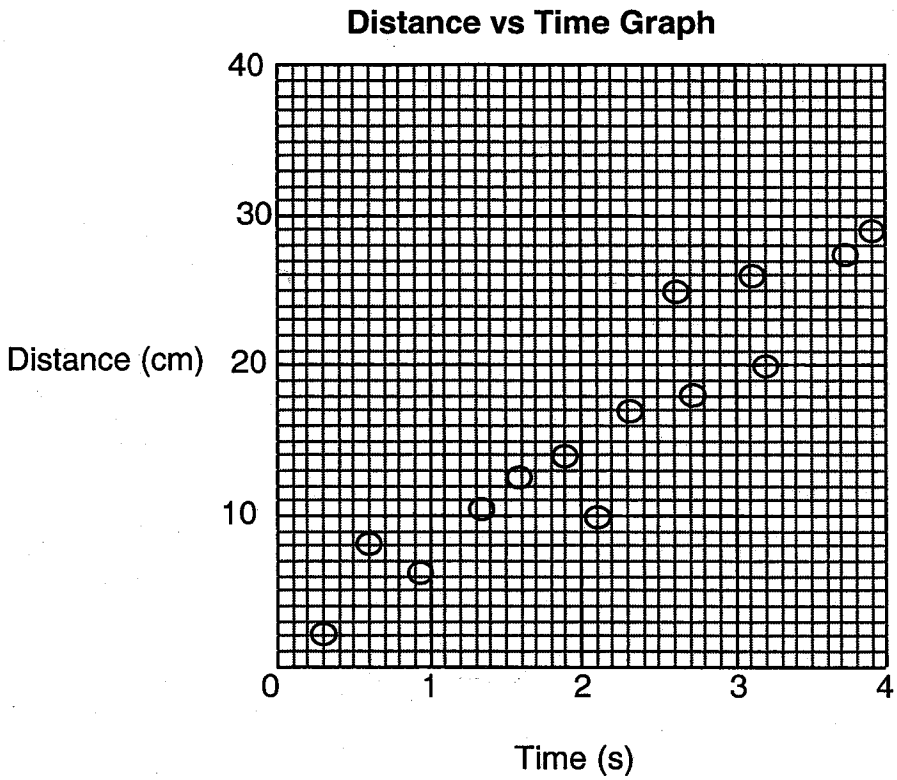
(ii) _____

_____

(iii) _____

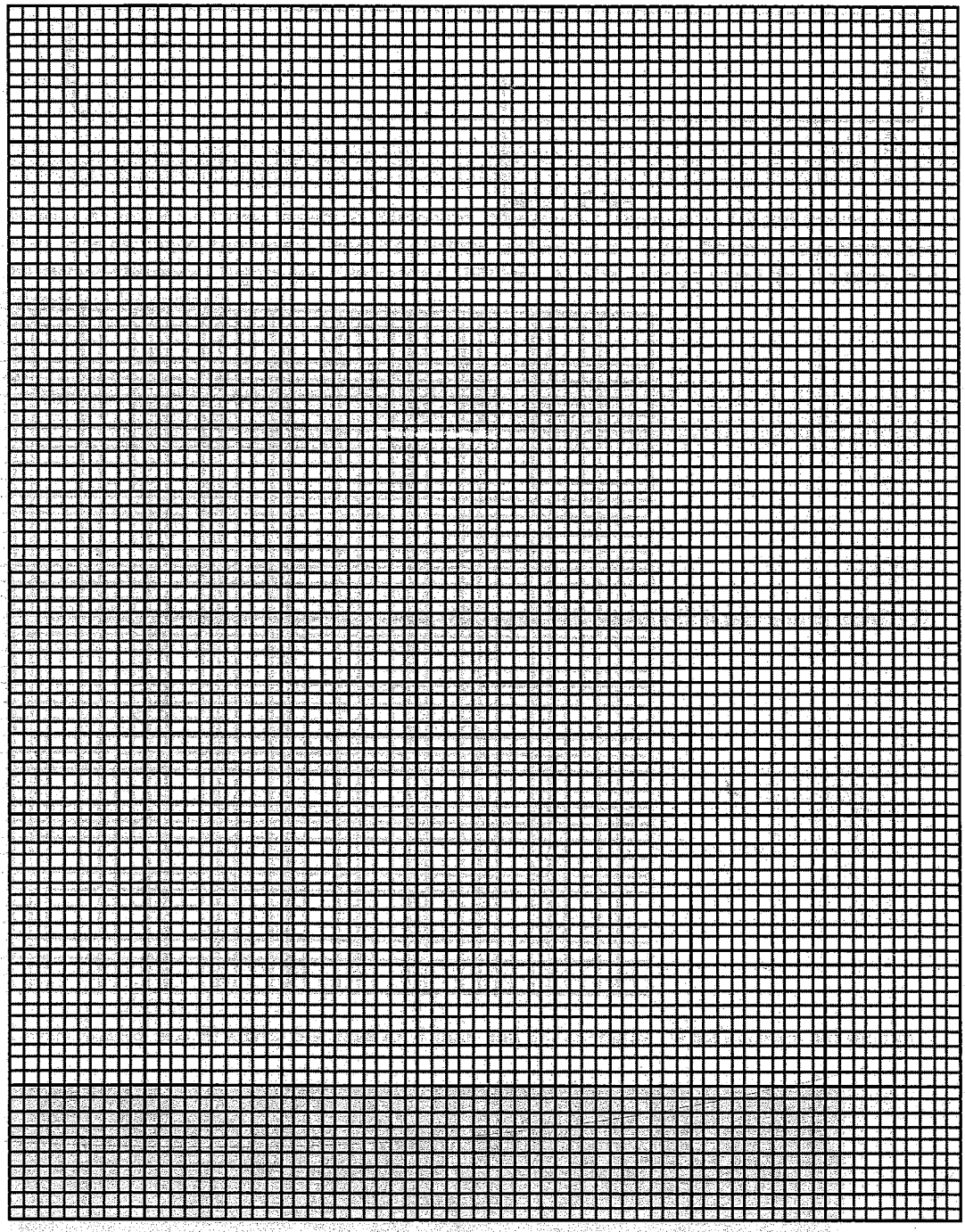
_____

6. Draw the straight best-fit line using the data points on the graph below.

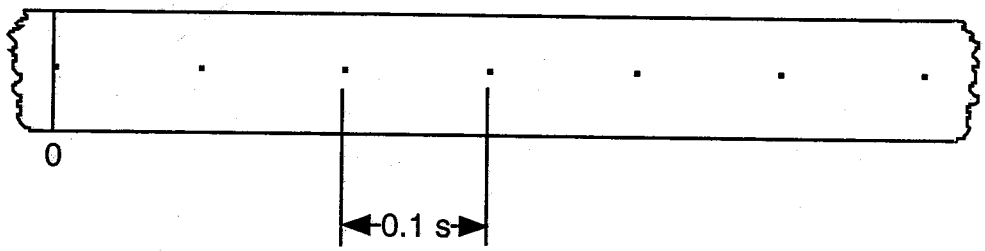


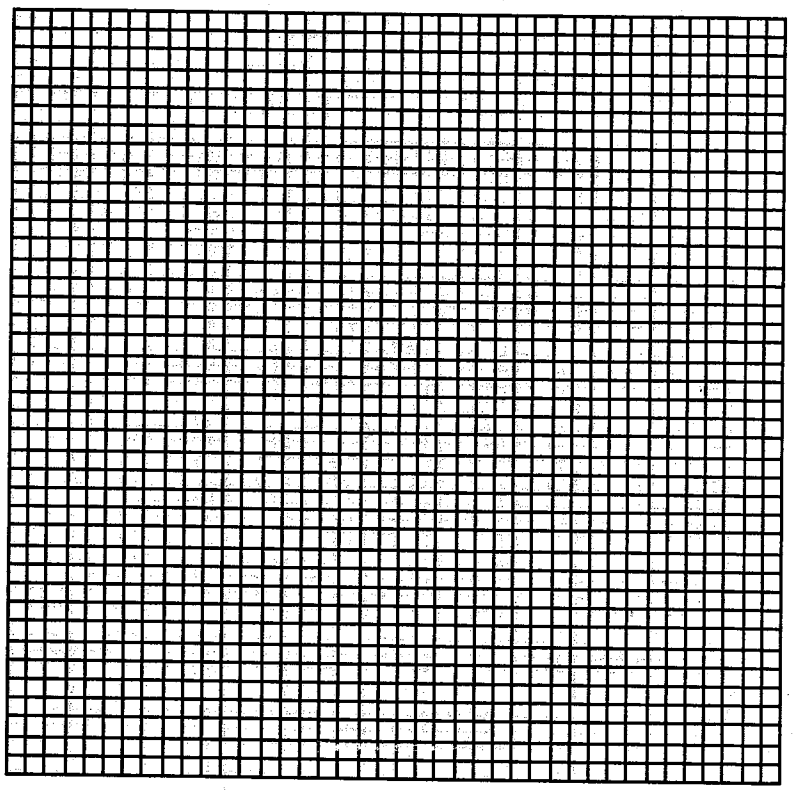
7. Plot the graph on the next page using the data provided below. Distance is the responding variable. Use a best-fit line.

Time (s)	Distance (cm)	Time (s)	Distance (cm)	Time (s)	Distance (cm)
0.0	0	2.1	70	4.2	144
0.3	10	2.4	80	4.5	150
0.6	23	2.7	95	4.8	163
0.9	30	3.0	100	5.1	170
1.2	37	3.3	110	5.4	175
1.5	44	3.6	114	5.7	196
1.8	57	3.9	130	6.0	200



8. A ticker tape is attached to a dynamic cart. The ticker tape timer is calibrated to mark the tape with a dot every 0.1 s. Use a metric ruler to measure the distance traveled every 0.1 s. Plot a distance vs time graph in grid provided below. Distance is the responding variable.





$$speed = \frac{distance\ change}{time\ change}$$

or

$$v = \frac{\Delta d}{\Delta t}$$

9. A car travels 275 km in 3.00 hours. What is the speed of that car?

10. Sarah is driving a car from Calgary to Edmonton. She leaves Calgary at 11 00 and arrives in Red Deer at 12 30. She has lunch, fills up her vehicle's gas tank, and leaves at 13 30. She arrives in Edmonton at 15 00. The distance between Calgary and Edmonton is 292 km. At what average speed did she travel between Calgary and Edmonton?

11. David is riding a bicycle at an average speed of 25 km/h. How long will it take him to travel 137.5 km?

12. Mary is jogging at 8.00 km/h. She runs for 1 hour and 20.0 minutes. What distance did she run?