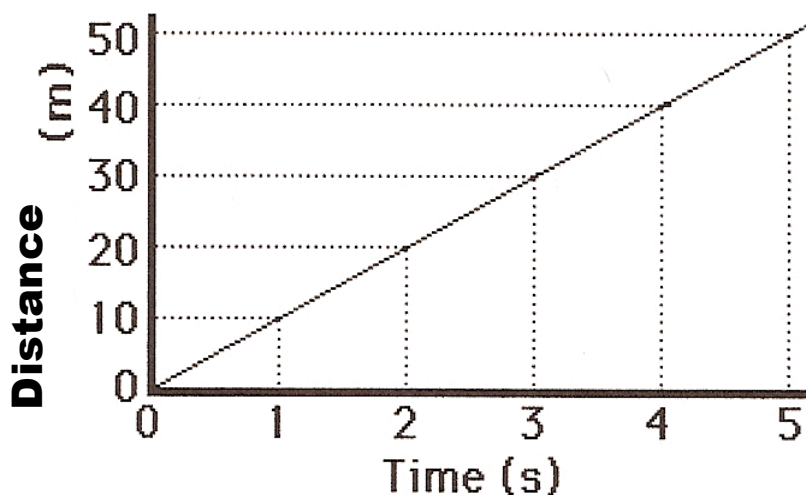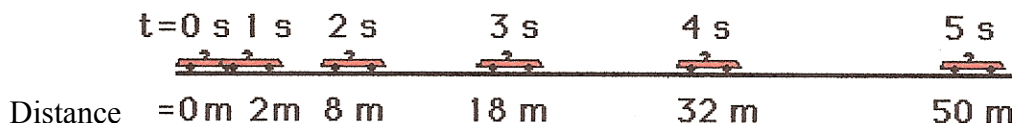# Science Skills -7
Graphing Motion

What exactly is motion? Motion refers to the change in position of an object over a period of time. Distance is the total length traveled by a moving object, usually measured in meters (m) or kilometers (km). Speed is the rate of change, or the average distance traveled by a moving object in a given unit of time, such as meters per second (m/s).

Motion can be graphed. In a distance-time graph, distance is placed on the y-axis and speed is placed on the x-axis.
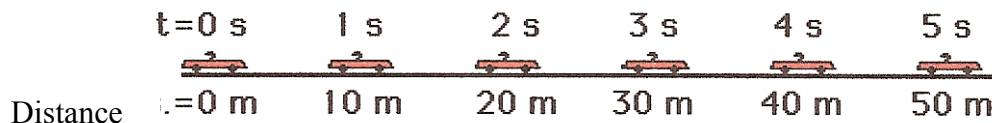
Directions: Look at the graph below. Determine which of the car pictures below is shown by the graph. Circle the correct picture.

A

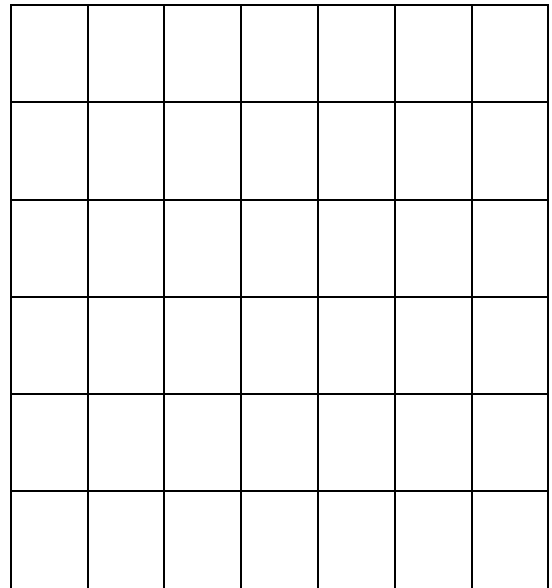|	t=0 s	1 s	2 s	3 s	4 s	5 s
Distance	=0 m	2 m	8 m	18 m	32 m	50 m

B

	t=0 s	1 s	2 s	3 s	4 s	5 s
Distance	=0 m	10 m	20 m	30 m	40 m	50 m

Directions: Graph the following information. Don't forget the title and the labels.

Time (hour)	Distance (km)
0	0
1	5
2	12
3	21
4	32
5	45
6	54

Speed can be determined by starting at the given time, tracing a dotted line to the line on the graph and then finding the distance traveled. Speed is expressed in distance per time such as 5km/1hour

Directions: Use the graph to calculate the speed. Be sure to reduce so that you have the km per 1 hour.

Questions:

1. What is the speed at 2 hours? _____

2. What is the speed at 4 hours? _____

3. What is the speed at 6 hours? _____