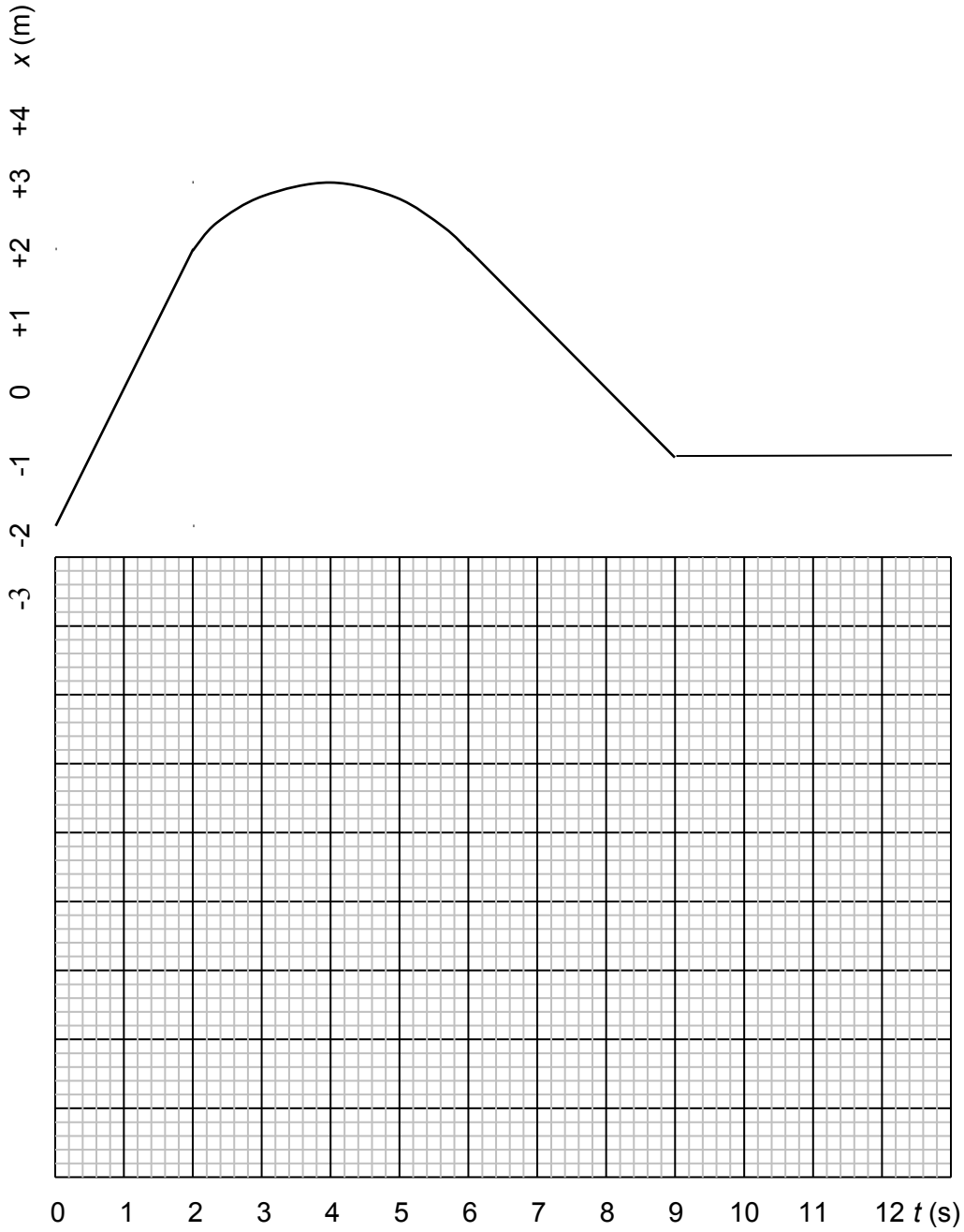
UPFY PHYSICS AUGUST 2005 BASIC KINEMATICS

Surname:_____ Initials_____ Name:_____ Group _____

Consider the following graph representing a small model car moving in a straight line. The small car is being pushed by a student along the floor of a laboratory. Regard the positive direction as forwards and the origin is the position when x = 0. x is the variable that represents position.



In each open block write down the phrase that correctly describes the aspect of motion mentioned at the top of the column and which is relevant for the time mentioned in the first column.
Your phrase should be one of the following: is increasing; is decreasing; is constant.

For example : during the time interval from 1s to 2s, the distance between the origin and the car is increasing. This has been filled in for you as the answer to question number 2.

	the distance	the car's speed	the car's	the car's

	between the origin and the car		displacement from the origin	instantaneous velocity
from 0 s to 1 s	1.	8.	15.	22.
from 1 s-2 s	2. is increasing	9.	16.	23.
from 2 s to 4 s	3.	10.	17.	24.
from 4 s to 6 s	4.	11.	18.	25.
from 6 s to 8 s	5.	12.	19.	26.
from 8 s to 9 s	6.	13.	20.	27.
from 9 s to 12 s	7.	14.	21.	28.

Now code the pink multiple choice answer sheet with you answers to following questions. Use Side 1 (The side written in Afrikaans)

1.	from 0 s to 1 s	the distance between the origin and the car	A) is increasing	B) is constant	C) is decreasing
2.	from 1 s-2 s	the distance between the origin and the car	A) is increasing	B) is constant	C) is decreasing
3.	from 2 s to 4 s	the distance between the origin and the car	A) is increasing	B) is constant	C) is decreasing
4.	from 4 s to 6 s	the distance between the origin and the car	A) is increasing	B) is constant	C) is decreasing
5.	from 6 s to 8 s	the distance between the origin and the car	A) is increasing	B) is constant	C) is decreasing
6.	from 8 s to 9 s	the distance between the origin and the car	A) is increasing	B) is constant	C) is decreasing
7.	from 9 s to 12 s	the distance between the origin and the car	A) is increasing	B) is constant	C) is decreasing
8.	from 0 s to 1 s	the car's speed	A) is increasing	B) is constant	C) is decreasing
9.	from 1 s-2 s	the car's speed	A) is increasing	B) is constant	C) is decreasing
10.	from 2 s to 4 s	the car's speed	A) is increasing	B) is constant	C) is decreasing
11.	from 4 s to 6 s	the car's speed	A) is increasing	B) is constant	C) is decreasing
12.	from 6 s to 8 s	the car's speed	A) is increasing	B) is constant	C) is decreasing
13.	from 8 s to 9 s	the car's speed	A) is increasing	B) is constant	C) is decreasing
14.	from 9 s to 12 s	the car's speed	A) is increasing	B) is constant	C) is decreasing
15.	from 0 s to 1 s	the car's displacement from the origin	A) is increasing	B) is constant	C) is decreasing
16.	from 1 s-2 s	the car's displacement from the origin	A) is increasing	B) is constant	C) is decreasing
17.	from 2 s to 4 s	the car's displacement from the origin	A) is increasing	B) is constant	C) is decreasing
18.	from 4 s to 6 s	the car's displacement from the origin	A) is increasing	B) is constant	C) is decreasing
19.	from 6 s to 8 s	the car's displacement from the origin	A) is increasing	B) is constant	C) is decreasing
20.	from 8 s to 9 s	the car's displacement from the origin	A) is increasing	B) is constant	C) is decreasing
21.	from 9 s to 12 s	the car's displacement from the origin	A) is increasing	B) is constant	C) is decreasing
22.	from 0 s to 1 s	the car's velocity	A) is increasing	B) is constant	C) is decreasing
23.	from 1 s-2 s	the car's velocity	A) is increasing	B) is constant	C) is decreasing
24.	from 2 s to 4 s	the car's velocity	A) is increasing	B) is constant	C) is decreasing
25.	from 4 s to 6 s	the car's velocity	A) is increasing	B) is constant	C) is decreasing
26.	from 6 s to 8 s	the car's velocity	A) is increasing	B) is constant	C) is decreasing
27.	from 8 s to 9 s	the car's velocity	A) is increasing	B) is constant	C) is decreasing
28.	from 9 s to 12 s	the car's velocity	A) is increasing	B) is constant	C) is decreasing

