

PROBLEMS

1. A particle of mass m moves in a straight line with constant acceleration a . It starts from rest at the origin O at time $t = 0$. Show that the distance s travelled in time t is given by $s = \frac{1}{2}at^2$.

2. A particle of mass m moves in a straight line with constant acceleration a . It starts from rest at the origin O at time $t = 0$. Show that the velocity v at time t is given by $v = at$.

3. A particle of mass m moves in a straight line with constant acceleration a . It starts from rest at the origin O at time $t = 0$. Show that the displacement s at time t is given by $s = \frac{1}{2}at^2$.

4. A particle of mass m moves in a straight line with constant acceleration a . It starts from rest at the origin O at time $t = 0$. Show that the velocity v at time t is given by $v = at$.

5. A particle of mass m moves in a straight line with constant acceleration a . It starts from rest at the origin O at time $t = 0$. Show that the displacement s at time t is given by $s = \frac{1}{2}at^2$.

Time t	Velocity v	Displacement s
0	0	0
1	a	$\frac{1}{2}a$
2	$2a$	$2a$
3	$3a$	$\frac{9}{2}a$
4	$4a$	$8a$
5	$5a$	$\frac{25}{2}a$

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