

PROBLEMS

1. A particle of mass m moves in a straight line with constant acceleration a . It starts from rest at the origin. Find its velocity and displacement after time t .

2. A particle is projected vertically upwards with an initial velocity u . Find the time it takes to reach a height h and the time it takes to return to the ground.

3. A particle is projected from the top of a cliff of height H with an initial velocity u . Find the time it takes to reach the ground.

4. A particle is projected from the ground with an initial velocity u at an angle θ to the horizontal. Find the time it takes to reach a height h and the time it takes to return to the ground.

5. A particle is projected from the ground with an initial velocity u at an angle θ to the horizontal. Find the range and the maximum height reached.

Time	Velocity	Displacement
0	0	0
t	at	$\frac{1}{2}at^2$
$\frac{u}{a}$	u	$\frac{u^2}{2a}$
$\frac{2u}{a}$	0	$\frac{u^2}{a}$

KINGSTON



Kingston is a city in the state of Virginia, United States. It is the largest city in the state and is located in the western Piedmont region. The city is known for its historic architecture and is home to many cultural institutions. The city is also a major center for commerce and industry in the region.