Answer on Question #43570 – Physics - Mechanics | Kinematics | Dynamics

A particle moves from origin in xy plane with velocity 3i+6xj find the equation if the path

Solution
$v = 3i + 6xj$
$v - velocity\ of\ the\ particle;$
$S -$ path followed by the particle
Equation if the path:

$$S(t) = \int_0^t v(t)dt = \int_0^t (3i + 6xj)dt = (3i + 6xj)t \Big|_0^t = (3i + 6xj)t$$

Answer: $(3i + 6xj)t$