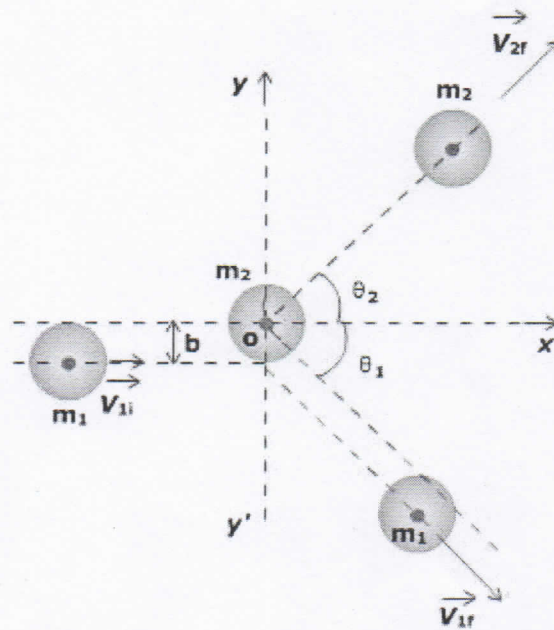


Physics 12

Collisions in Two Dimensions

1. In physics 11 the collisions of objects were in one dimension.



	X Momentum before	X Momentum after	Y momentum before	Y momentum after
Object 1	$m_1 v_1$	$m_1 v_1' \cos \theta_1$	$m_1 v_1 \sin \theta_1$	$m_1 v_1' \sin \theta_1$
Object 2	0	$m_2 v_2' \cos \theta_2$	0	$m_2 v_2' \sin \theta_2$
Total	$m_1 v_1$	$m_1 v_1' \cos \theta_1 + m_2 v_2' \cos \theta_2$	0	$m_1 v_1' \sin \theta_1 + m_2 v_2' \sin \theta_2$