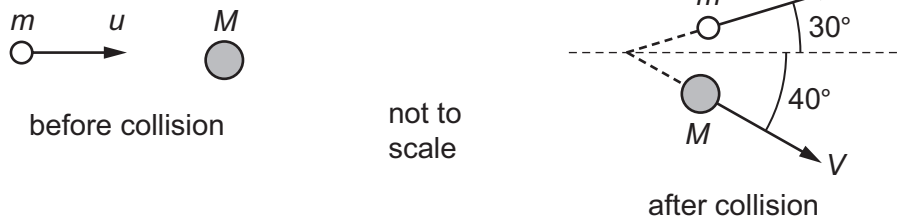
11 A ball of mass *m* travelling at velocity *u* collides with a stationary ball of mass *M*. After collision the two balls travel at velocities *v* and *V* respectively, in the directions shown.

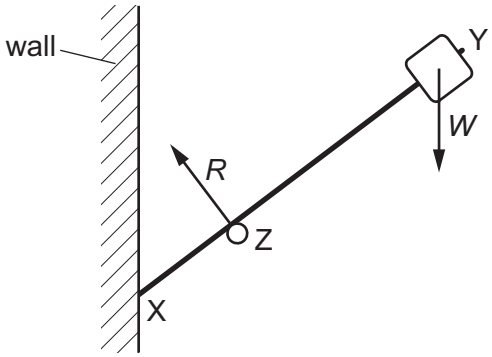


A student writes three equations relating to the collision.

Which row in the table indicates the correct and incorrect equations?

	$mu = MV + mv$	$mv \sin 30° = MV \sin 40°$	$mu = mv \cos 30° + MV \cos 40°$
A	correct	correct	correct
B	incorrect	correct	incorrect
C	correct	incorrect	incorrect
D	incorrect	correct	correct

12 A light rigid rod XY has an object of weight *W* fixed at one end. The rod is in equilibrium, resting on a roller at Z and a vertical wall at X. The roller exerts a force *R* on the rod as shown. The diagram shows the directions, but not the magnitudes, of the forces *R* and *W*.



What is the direction of the force on the rod at X?

A **B** **C** **D**