

Simple Ball Collision Calculations

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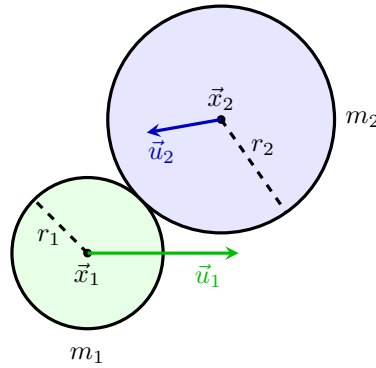
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1 Ball-Ball Collision

1.1 Problem

At a time $t_0 = 0$ two perfectly spherical balls with radii r_i and masses m_i ($i \in 1, 2$)

Illustration:



1. What is the time t of the collision?
2. What are the positions \vec{x}_i of their centers at that time?
3. What are the velocities \vec{v}_i after the collision?

1.2 Solution