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On number of collisions of billiard balls

In lieu of an abstract I offer a problem. Consider three billiard balls of the same radius and mass, undergoing totally elastic reflections on a billiard table with no walls (the whole plane). All three balls can be given non-zero initial velocities. What is the maximum (supremum) possible number of collisions among the three balls? The supremum is taken over all initial positions and initial velocities. I will discuss this problem and its generalization to any finite family of balls in one, two and higher dimensions. Joint work with Mauricio Duarte.