Two pendulums

Questions

1. What is the phase difference between the oscillations when you ran the simulation for the first time?
2. For what phase difference would the pendulums oscillate such that they are always moving on opposite direction?
3. Can the phase difference between them be constant if the pendulums are of different length?
4. For maximum possible distance of separation between the oscillators, what should be the phase difference between them?
5. For minimum possible distance of separation between the oscillators, what should be the phase difference between them?

Note :

Questions given above may be visualized and solved using the simulations, obtaining a mathematical solution is to be always treated as the final answer. Such a mathematical solution implies that one is able to understand and apply the concept.