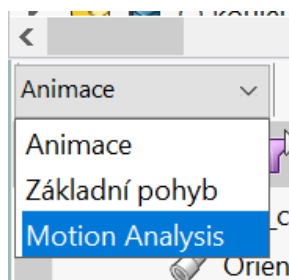
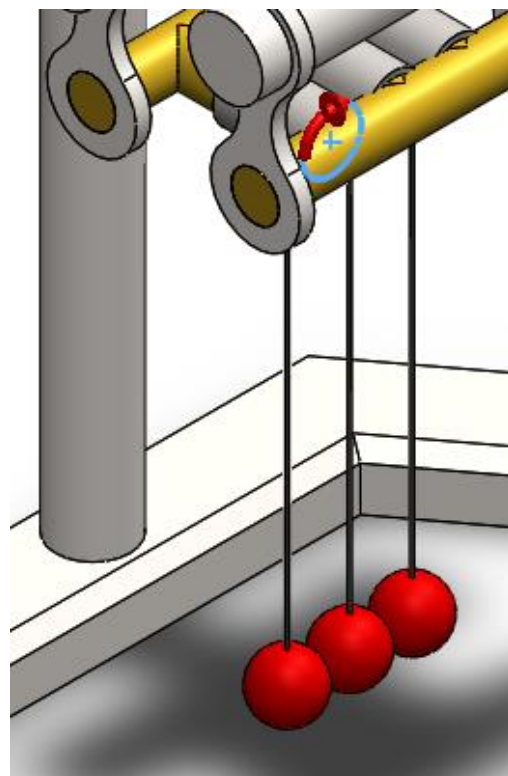
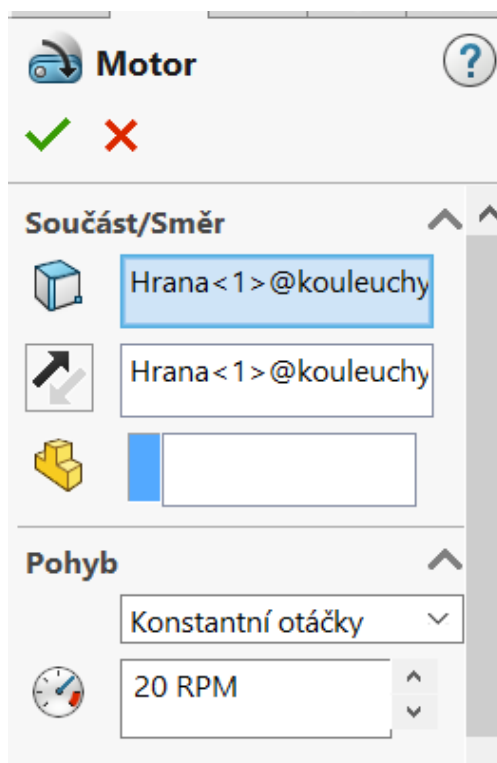


Motion study

1. For motion study we will use the Solidworks Add-in SOLIDWORKS MOTION. You need to turn it on in the add-in bookmark.
2. On the lower bar select Motion study. Parameters of the motion study will open in the lower part of the screen. Change the type of study from “Animation” to “Motion Analysis”. This mode generates more real simulations.
3. We need to add 1. gravity, 2. contact of bodies, 3. motor for the initial pull of the ball.

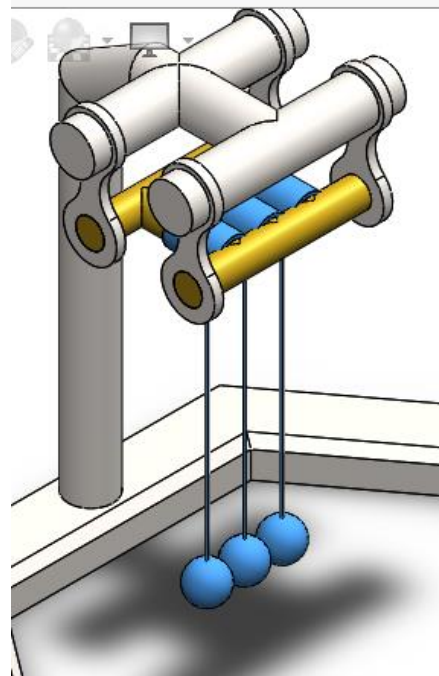
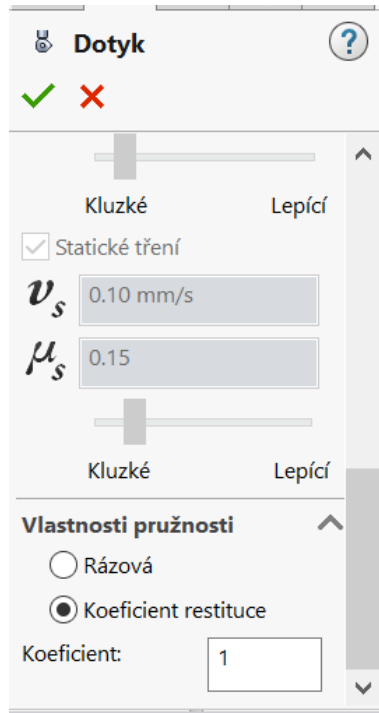


4. In gravity we only edit the direction.
5. In motor we choose rotary motor with constant RPM. Try to select your own value of RPM.

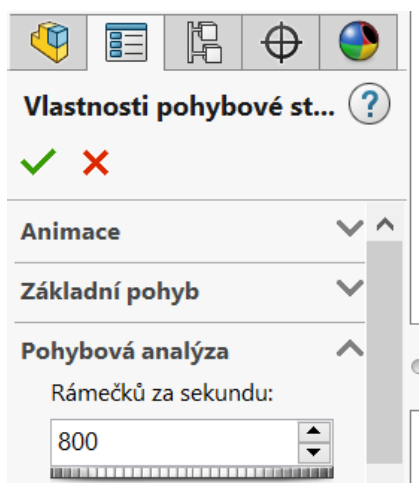


6.

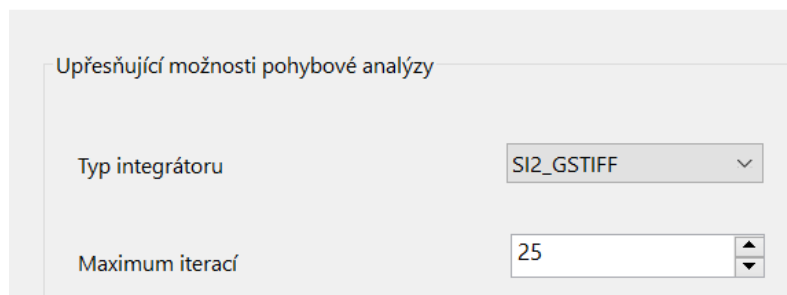
- For contact select all 3 balls. Turn off Material and Friction influence. In the “elasticity properties” tab set the restitution coefficient to 1. This way 100 % of energy will be transferred to the next body.



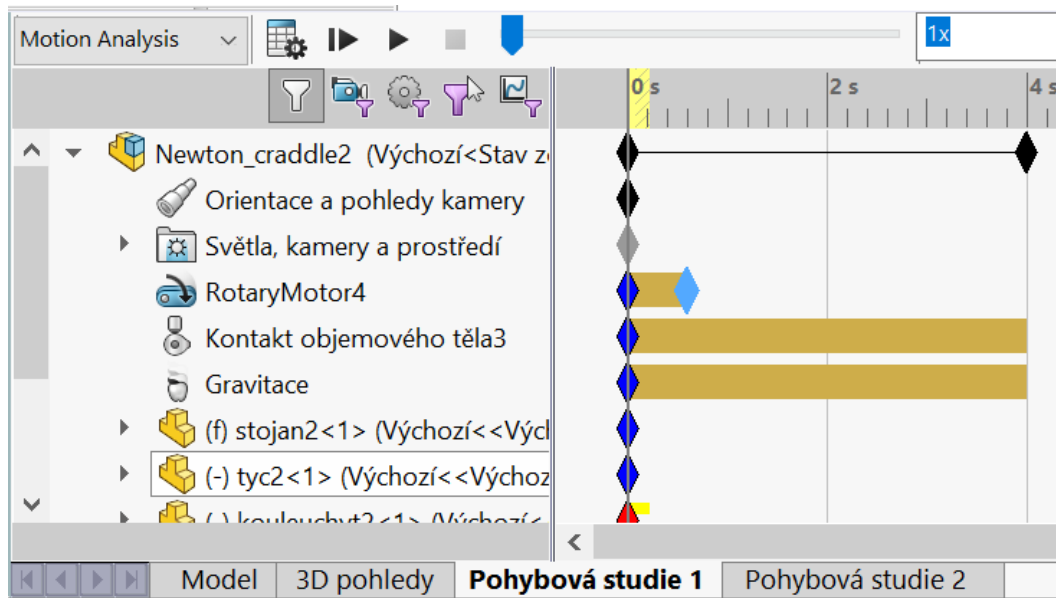
- In properties of Motion analysis set the FPS of motion analysis to at least 800. This will ensure proper computation of the analysis, although it will take longer to calculate. In advanced properties change the type of integrator to SI2_GSTIFF.



Upřesňující možnosti pohybové analýzy



9. the timeline of events states the total time of the study. By right clicking on the lines you add keys. By right clicking on a new key we can assign it as “Turned off”. This ends the selected component of motion analysis. Gravity and contact will stay on for the entire study. Motor will be on only in the beginning.



10. Start the simulation by clicking “Calculate”.



11. Try to add one more simulation. This time use motor on second ball as well to introduce uneven motion.