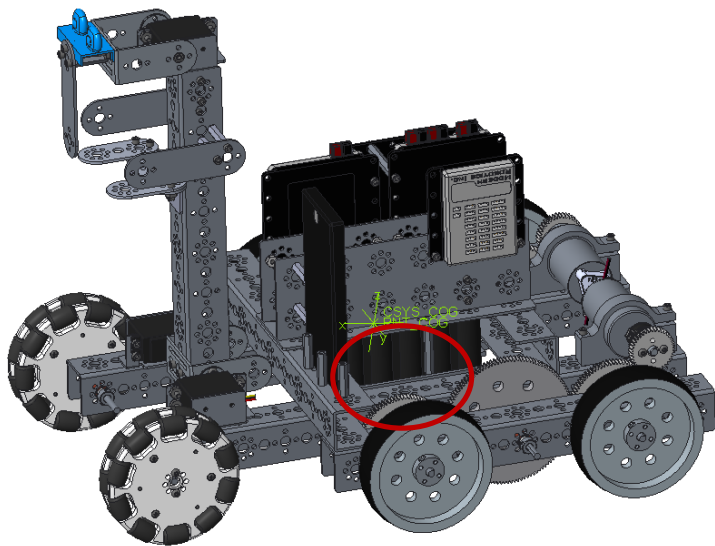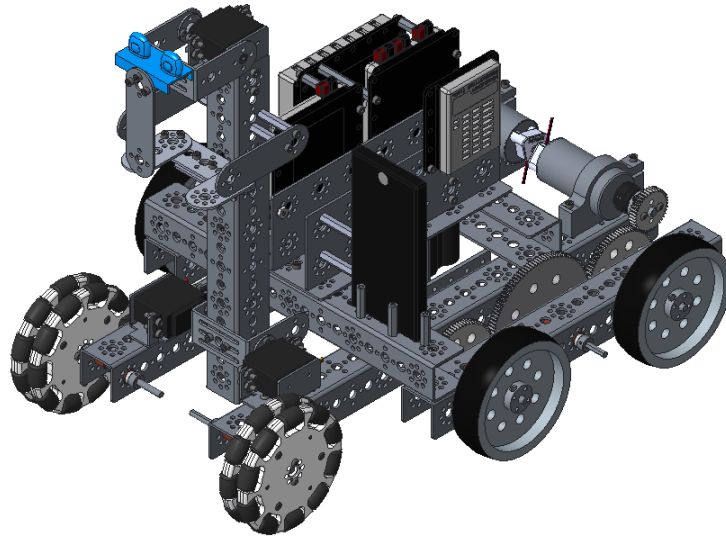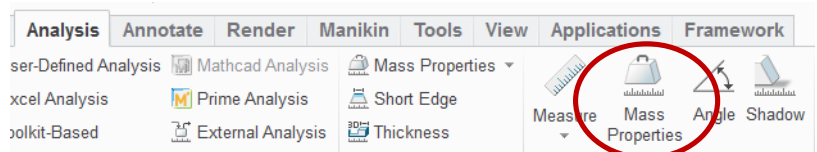## Include a Center of Gravity Feature in Your Robot Model

The steps below calculate the position of your robot model's center of gravity and displays it as a point in the graphic area and as a mass property feature in the model tree.

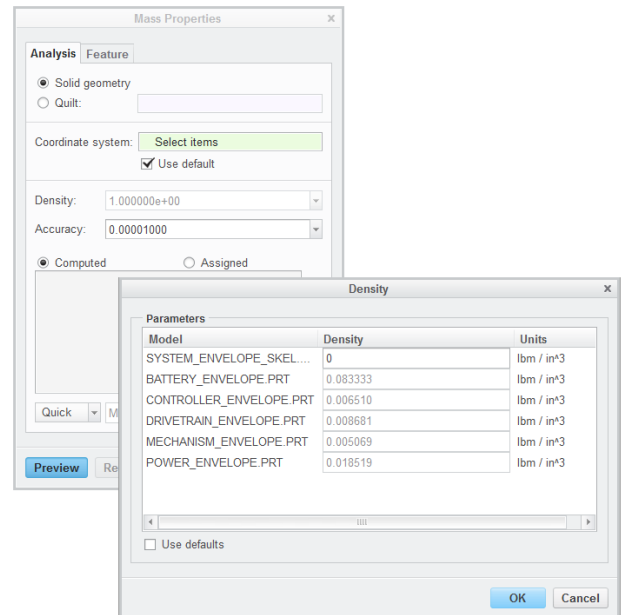*Start the exercise with you robot system model open in Creo.*

1. From the Analysis toolbar, select **Mass Properties** .
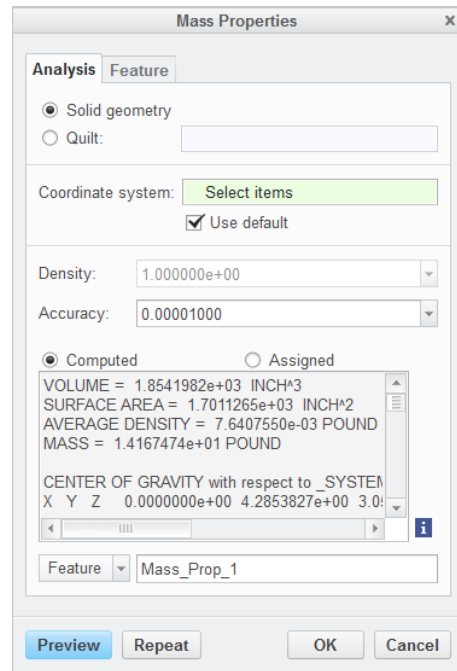

2. Calculate the mass properties by clicking **Preview**.

The first time you calculate the mass properties of the entire system, a pop-up window shows the density of each part in the assembly.
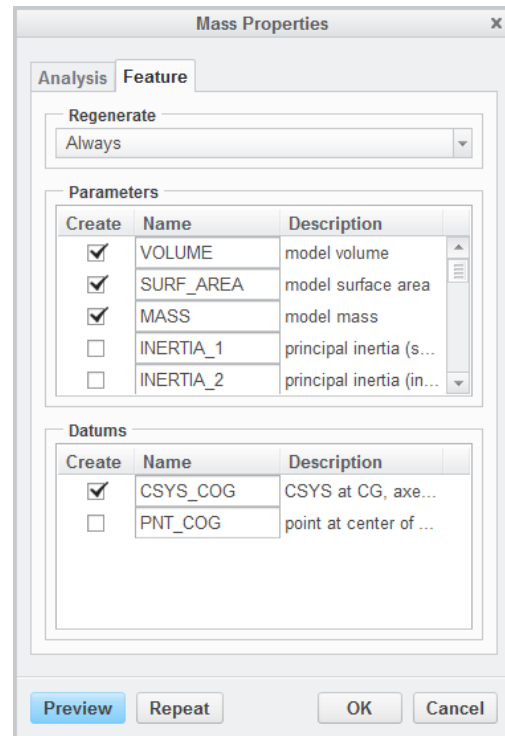
3. Change the density of SYSTEM_ENVELOPE_SKEL.PRT to **0**.

4. Set the pull-down menu that is currently displays **Quick** and select **Feature**.
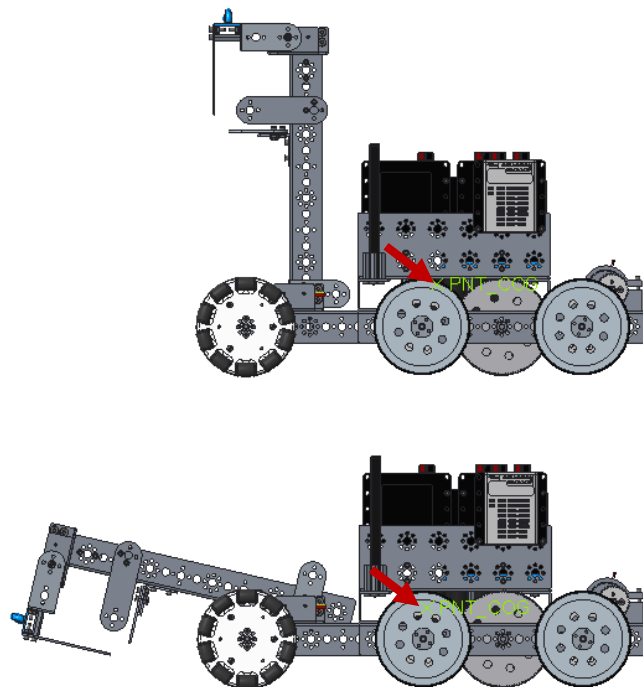
5. Click the Feature tab at the top of the Mass Properties window.

6. In the Datums field, check the box next to **CSYS_COG** and **PNT_COG** to create a coordinate system and datum point at the center of gravity.

7. Click **Ok** to finish.

PNT_COG in your model at the point representing the system center of gravity.
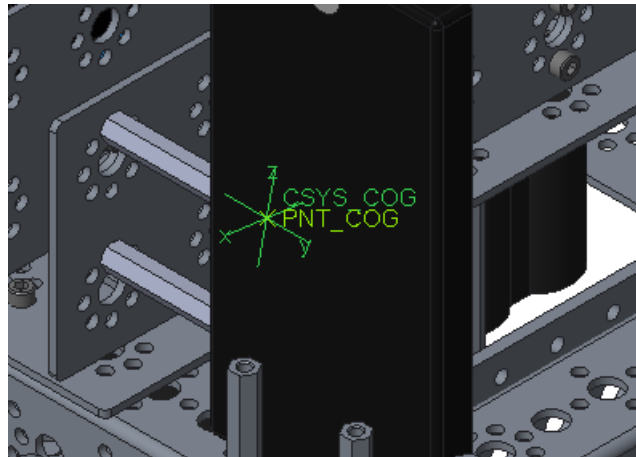
As you change the position of mechanisms, the center of gravity will move (after the model is regenerated) as the mass is repositioned.

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