The specific performance metrics are as follows:

- scenario 2
    - roll should less than 0.025 radian of nominal for 0.75 seconds (3/4 of the duration of the loop)
    - roll rate should less than 2.5 radian/sec for 0.75 seconds

Model tuned: `kpPQR = 94, 94, 5`

- scenario 3
    - X position of both drones should be within 0.1 meters of the target for at least 1.25 seconds
    - Quad2 yaw should be within 0.1 of the target for at least 1 second

Model parameters tuned: `kpPosXY = 30  kpPosZ = 20  KiPosZ = 40`

- scenario 4
    - position error for all 3 quads should be less than 0.1 meters for at least 1.5 seconds

Parameters tuned are working for this by adjusting values thru experimentation

- scenario 5
    - position error of the quad should be less than 0.25 meters for at least 3 seconds

Modified values to match all needed values based on control theory for PID design using calculus.