—Python-based codes for constructing and animating two-stage gear train—

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gear1 = Gear("blue", 16, 12)

gear2 = Gear("green", 16, 24)

gear3 = Gear("brown", 16, 12)

gear4 = Gear("purple", 16, 36)

#

omega\_o = 3

omega\_1 = 6 \* omega\_o

omega\_2\_3 = -3 \* omega\_o

omega\_4 = 1 \* omega\_o

while True:

 theta\_1 += omega\_1 \* 0.005

 theta\_2\_3 += omega\_2\_3 \* 0.005

 theta\_4 += omega\_4 \* 0.005

 #

 gear1.rotate\_and\_translate(theta\_1, 112, CY)

 gear2.rotate\_and\_translate(theta\_2\_3, 400, CY)

 gear3.rotate\_and\_translate(theta\_2\_3, 400, CY)

 gear4.rotate\_and\_translate(theta\_4, 784, CY)

 root.update()

 time.sleep(0.005)

root.mainloop()