Classical Mechanics Problem - Freestyle skier flipping into a tuc position

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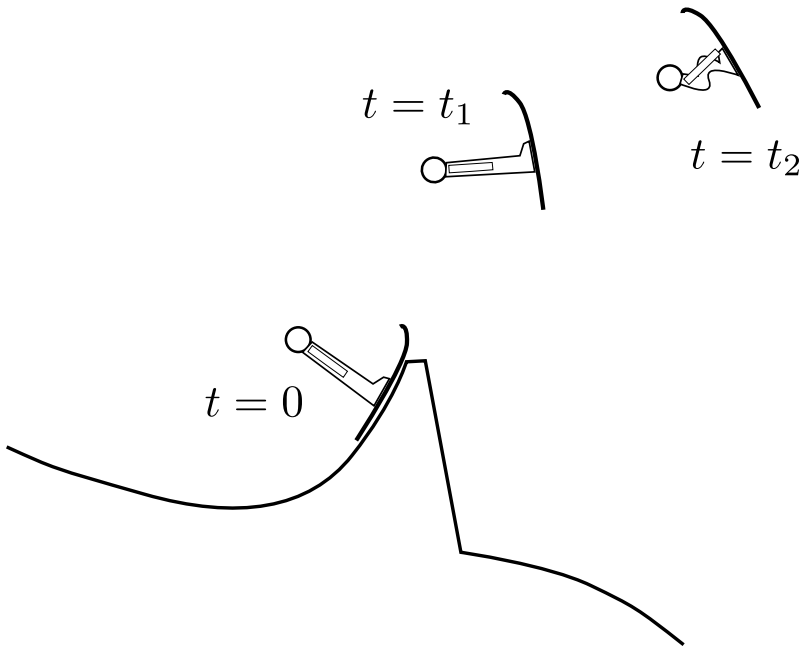
An olympic aerial ski jumper takes off the lip of a jump at time $t = 0$. At a time t_1 later they rotate counter-clockwise by θ_1. Between time t_1 and time t_2, as they rotate counter-clockwise to an angle θ_2, they gradually(linearly) decrease their moment of inertia moving into a tuc position.



At what later time t_3 will the jumper have rotated a total of n times from their original orientation? Draw a plot of angle vs. time from $t = 0$ to $t = t_3$. Consider the original orientation to be 0 degrees.