

Let $y = \text{zoom}$

t_0 is initial = zoomTime

t_f is what zoomTime needs to be set to for zoom speed to be constant

c_f is final camera ratio of the first zoom request

c_0 is initial camera ratio of the first zoom request

d_f is the final camera ratio of the second zoom request

d_0 is the initial camera ratio of the second zoom request

$$a_0 = c_f + c_0$$

$$b_0 = -2c_f - c_0$$

$$a_f = d_f + d_0$$

$$b_f = -2d_f + d_0$$

$$t_f = \frac{2 * t_0 * a_0 - b_0 + b_f}{2 * a_f}$$