

Day 16 TI calculator commands

- ① $[2 \cos(t), \sin(t), 3] * t \rightarrow r$
- ② $d(r, t) \rightarrow v$ } TI $\frac{d}{dt}(r) \rightarrow v$ } TI
- ③ $d(v, t) \rightarrow a$ } 89 commands $\frac{d}{dt}(v) \rightarrow a$ } inspire commands
- ④ $12 \rightarrow t$
- ⑤ $\text{norm}(v) \rightarrow nv$ } the speed $|\vec{v}_0|$
- ⑥ $v/nv \rightarrow ta$ } unit tangent \vec{T}_0
- ⑦ $a - \text{dotP}(ta, a) * ta \rightarrow ap$ } \vec{a}_\perp
- ⑧ $\text{norm}(ap) \rightarrow nap$ } $|\vec{a}_\perp|$
- ⑨ $nv^2 / nap \rightarrow rr$ } R_0 radius of curvature
- ⑩ $ap / nap \rightarrow n$ } \vec{N}_0 (unit normal)
- ⑪ r } \vec{r}_0 } These are used to
- ⑫ $rr * n$ } $R_0 \vec{N}_0$ } parametrize the
- ⑬ $rr * ta$ } $R_0 \vec{T}_0$ } osculating circle
- ⑭ DelVar $t, r, v, a, nv, ta, ap, nap, rr, n$