# Harold's Kinematic Graphs
## "Cheat Sheet"
26 November 2017

## Distance, Velocity, Acceleration, Jerk

| | Area | Slope | Equations | Time Graphs |
|---|---|---|---|---|
| **Distance** | ↑ | ↓ | $x$ |  |
| **Velocity** | ↑ | ↓ | $v = \dfrac{x}{t}$ |  |
| **Acceleration** | ↑ | ↓ | $a = \dfrac{v}{t} = \dfrac{x}{t^2}$ |  |
| **Jerk** | ↑ | ↓ | $j = \dfrac{a}{t} = \dfrac{v}{t^2} = \dfrac{x}{t^3}$ |  |
| **Polynomials** | Constant Linear Quadratic Cubic Quartic | $x^0 = 1 \;\to c$ $x^1 = x \;\to mx + b$ $x^2 = x^2 \to ax^2 + bx + c$ $x^3 = x^3 \to ax^3 + bx^2 + cx + d$ $x^4 = x^4 \to ax^4 + bx^3 + \cdots$ | |  |



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