**Harold’s Kinematic Graphs**

**“Cheat Sheet”**

26 November 2017

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| **Distance, Velocity, Acceleration, Jerk** |
|  | **Area** | **Slope** | **Equations** | **Time Graphs** |
| **Distance** | ↑ | ↓ | $$x$$ |  |
| **Velocity** | ↑ | ↓ | $$v=\frac{x}{t}$$ |  |
| **Acceleration** | ↑ | ↓ | $$a=\frac{v}{t}=\frac{x}{t^{2}}$$ |  |
| **Jerk** | ↑ | ↓ | $$j=\frac{a}{t}=\frac{v}{t^{2}}=\frac{x}{t^{3}}$$ |  |
| **Polynomials** | ConstantLinearQuadraticCubicQuartic | $$x^{0}=1 \rightarrow c$$$$x^{1}=x \rightarrow mx+b$$$$x^{2}=x^{2}\rightarrow ax^{2}+bx+c$$$$x^{3}=x^{3}\rightarrow ax^{3}+bx^{2}+cx+d$$$$x^{4}=x^{4}\rightarrow ax^{4}+bx^{3}+…$$ |  |
| Image result for graph velocity vs time |