

## Part I: Pen and paper

1. Question summary can go here.

- (a) Place your solution. Math can be entered using the equation environment

$$\vec{\mathbf{r}} = \vec{\mathbf{r}}_0 + \vec{\mathbf{v}}_0 t + \frac{1}{2} \vec{\mathbf{a}} t^2 \quad (1)$$

If you then were working in say the  $x$ -direction and had some numbers

$$\begin{aligned} x &= x_0 + v_{x0}t + \frac{1}{2}a_x t^2 \\ &= 1.2 \text{ m} + (4.0 \text{ m/s})(3.0 \text{ s}) + \frac{1}{2}(-1.0 \text{ m/s}^2)(3.0 \text{ s})^2 \\ &= \boxed{8.7 \text{ m}} \end{aligned} \quad (2)$$

- (b) When you get to the next part, you can add a `\item` to get the appropriate label. Also, if you don't like all the equation numbers, you can use the following to have the equation with no number

$$\sum \vec{\mathbf{F}} = m\vec{\mathbf{a}}$$

- (c) For more details on putting math into  $\text{\LaTeX}$  documents you can see [this page on Overleaf](#).
2. When you get to the next problem, you can end the enumerate for the parts of the previous problem and then add another item.
    - (a) Use a nested enumerate environment to label the parts of the next problem.
    - (b) For a quick and broad overview of how to create documents in  $\text{\LaTeX}$  see [this quick tutorial from Overleaf](#).

## Part II: Programming

3. Solution to the programming questions here.

**End note:** do not forget to also submit your Jupyter notebook