Course: Title

Due on Due Date at 11:59 PM

Instuctor, Section

Author

September 10, 2024

Problem 1

Write problem statement here.

Solution

Write solution here.

Problem 2

Homework problems are placed on individual pages.

Solution

Solutions are placed below the problem statement, and can be split

Part A

into

Part B

different parts.

Problem 3

Problems can include **inline math:** $F_P = -b\dot{x}^2$ and **display math:**

$$\Delta E_{12} = Q_{12} + W_{12} \therefore W_{12} = Q_{12}.$$

Solution

And so can solutions.

Personally, I like to use `align*` environments (though you can use `gather*` environments) for multi-line math.

$$\begin{aligned} m_P \frac{d\dot{x}}{dt} &= F_P \\ m_P \frac{d\dot{x}}{dt} &= -b\dot{x}^2 \\ \frac{d\dot{x}}{\dot{x}^2} &= -\frac{b}{m_P} dt \\ \left[-\frac{1}{\dot{x}}\right]_{v_0}^{\dot{x}} &= -\frac{b}{m_P}(t - t_0) \\ \dot{x} &= \left[v_0^{-1} + \frac{b}{m_P}(t - t_0)\right] \quad \square. \end{aligned}$$

You can also display code blocks using `lstlisting` environments.

```
        minutes_to_convert = 122
        convert_label = " Minutes "
        if minutes_to_convert == 1:
            convert_label = " Minute "

        hours = int(minutes_to_convert / 60)
        minutes = minutes_to_convert % 60

        hour_label = " Hours, "
        if hours == 1:
            hour_label = " Hour, "

        minute_label = " Minutes"
        if minutes == 1:
            minute_label = " Minute"

        print(
            str(minutes_to_convert)
            + convert_label
            + "is the same as:\n"
            + str(hours)
            + hour_label
            + str(minutes)
            + minute_label
        )

```