coursera

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How to Write Math in the Discussion Forums Using MathJax

Coursera uses MathJax, and math is written using LaTeX syntax, enclosed in double-dollar signs. For example,

```
$$a_1b_2 - a_2b_1$$
```

will look to the reader like

$$a_1b_2 - a_2b_1.$$

For those of you who don't know LaTeX, I will show you how to write some math expressions that you can use to model your mathematical writing. For a more general overview of the syntax, you may refer to

https://math.meta.stackexchange.com/questions/5020/mathjax-basic-tutorial-and-quick-reference

Here are a selection of some sample math expressions from this course. Remember to add the double-dollar signs to the math expressions (not added here to prevent MathJax from translating).

(1)

\displaystyle ml\frac{d^2\theta}{dt^2} + cl\frac{d\theta}{dt} + mg\sin{\theta} = F_0\cos{\omega t}

$$ml\frac{d^2\theta}{dt^2} + cl\frac{d\theta}{dt} + mg\sin\theta = F_0\cos\omega t$$

(2)

\int_1^y \frac{dy}{y^2} = - \int_0^x \sin{x} \,dx

$$\int_1^y \frac{dy}{y^2} = -\int_0^x \sin x\,dx$$

(3)

\displaystyle y(x) = \frac{1}{\mu(x)} \left(y_0 + \int_{x_0}^x \mu(x) g(x) \,dx \right)

$$y(x) = \frac{1}{\mu(x)}\left(y_0 + \int_{x_0}^x \mu(x)g(x)\,dx\right)$$