

**Partial Differential Equations in Action**

**MATH50008**

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**Student Answers to Coursework 1**

1. If you want your equation to be numbered you can use the following environment

$$u(x, t) = f(x, t) \quad (1)$$

but if you prefer them not to be numbered just use the starred version of the environment

$$u(x, t) = f(x, t)$$

If you need to go back to text inside the equation environment, use `\mbox{}` as follows

$$\frac{du}{dt} = 0 \quad \text{on the characteristic defined by} \quad \frac{dx}{dt} = f(x)$$

For equations with multiple lines, the `align` environment is particularly useful.

2. (a)  
(b)
3.