

Latex template for theory courses at OSU

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Theorem 1. *The latex package amsthm makes defining mathematically environments easy.*

Proof. In the preamble,

```
\newtheorem{theorem}{Theorem}
```

defines the theorem environment. amsthm also has a built in proof environment. □

There are many packages for defining pseudocode, but my favourite is the very simple tabbing environment, illustrated here:

```
SUMOFNUMBERS(n)  
  x = 0  
  for i = 1, ..., n  
    x = x + i  
  return x
```

Formulae can be set within a line such as this: $f(x, y) = (x + y)(x - y)$ or set out as in Equation (1).

$$f(x, y) = (x + y)(x - y) \tag{1}$$

Here is an unnumbered multi-line formula:

$$\begin{aligned} f(x, y) &= (x + y)(x - y) \\ &= x(x - y) + y(x - y) \\ &= x^2 - xy + xy - y^2 \\ &= x^2 - y^2 \end{aligned}$$