By default, theorems, lemmas, and corollaries are defined as follows:

```
\newtheorem{Theorem}{Theorem}
\newtheorem{Corollary}{Corollary}[Theorem]
\newtheorem{Lemma}[Theorem]{Lemma}
```

To change these defaults, or add others, check the next page for uses for `..initheorem*` or `..initheorem` like so.

To begin a theorem environment, use `..begin thm Theorem_Type [Theorem name]`. Theorem types that are available by default are "Theorem", "Lemma", and "Corollary".

```
..begin thm Theorem Stoke's Theorem
```

Theorem 1 (Stoke's Theorem)**.** *For a closed surface oriented counter-clockwise,*

$$\int_C \vec{F} \cdot d\vec{r} = \iint_S (\nabla \times \vec{F}) \cdot d\boldsymbol{S}$$

```
..end thm Theorem
```

```
..begin thm Lemma
```

Lemma 2. *This is a lemma.*

```
..end thm Lemma
```

`..initheorem* XYZ` will create theorem type **XYZ** with no numbering. Equivalent to `\newtheorem*{XYZ}{XYZ}`

`..initheorem XYZ` will create theorem type **XYZ** with a counter that increments each time **XYZ** is created. Equivalent to `\newtheorem{XYZ}{XYZ}`

`..initheorem XYZ ABC sub` will create theorem type **XYZ** that is **subordinate** to counter type **ABC**. Equivalent to `\newtheorem{XYZ}{XYZ}[ABC]`

`..initheorem XYZ ABC shared` will create theorem type **XYZ** that is **shared** with counter type **ABC**. Equivalent to `\newtheorem{XYZ}[ABC]{XYZ}`