LATEX WORKSHEET

CCNY AWM

1. Section Title

1.1. Subsection Title. Some plain text. *Some italic text.* **Some bold text.**

a) The first item.

b) The second item.

- The first item.
- The second item

	col1	col2
row1	cell1	cell2
row2	cell3	cell4

TODO

$$\begin{tikzcd}
\mathcal{B} \arrow[r, "\mathrm{incl}"] \arrow[dr, "\varphi"'] & \mathcal{F}\mathrm{r}(\mathcal{B}) \arrow[d, "\Phi"] \\
 & M
\end{tikzcd}$$

Figure 1. The universal property of free modules. (This diagram commutes!)

Theorem 1.1 (Theorem Name)**.** *Theorem statement.*

Proof. A Proof. ∎

Definition (Term)**.** Definition statement.

Here's an inline math equation: $f : X \to Y$.

$$
\begin{aligned}
g &: X \to Y \\
h &: X \to Y
\end{aligned}
$$

$$
\begin{aligned}
(a+b)+(c+d) &= ((a+b)+c)+d \\
&= (a+(b+c))+d \\
&= a+((b+c)+d) \\
&= a+(b+(c+d))
\end{aligned}
$$

$$
||a+b|| \leq ||a|| + ||b|| \tag{1}
$$

$$
\begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}
$$

$$
f(x) = \begin{cases} 1, & \text{x rational} \\ 0, & \text{x irrational} \end{cases}
$$

$$
det(A) = \sum_{\sigma \in S_n} \operatorname{sgn}(\sigma) \left(\prod_{i=1}^{n} \alpha_{i,\sigma(i)} \right)
$$

Here's an article citation. [1] Here's a book citation with a specific section. [2, §1.1] Here's a website citation. [3]

References

[1] A.Y. Okounkov A.M. Vershik. "A New Approach to the Representation Theory of the Symmetric Groups. II." In: *J Math Sci* 131 (2005), pp. 5471–5494.

[2] Emily Riehl. *Category Theory in Context*. Dover Publications, 2016. ISBN: 978-0486809038. URL: `https://math.jhu.edu/~eriehl/context/`.

[3] Wikipedia. *Tensor product of modules*. URL: `https://en.wikipedia.org/wiki/Tensor_product_of_modules#Modules_over_commutative_rings` (visited on 12/22/2021).