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

TODO: triangle TODO: lattice

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

Proof. A Proof. □

Definition (Term). Definition statement.

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

$$g : X \to Y$$
$$h : X \to Y$$

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

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

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

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

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

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).