

CS325 Assignment #1, Summer 2009, OSU

YOUR NAME GOES HERE

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1 Introduction

Here is an a statement about big O, $3n^2 \in O(n^2)$. People also write $3n^2 = O(n^2)$ to mean the same thing. Here is the triple-equals equivalence sign: $P(n) \equiv n^2 \in O(n^3)$. Here are some inequalities: $4 < 5, 4 \leq 5, x \geq y$. Here is a more complicated exponent: n^{x+5} . Here is a subscript: $x_1, x_2, x_3, \dots, x_n$. Here is a fraction $\frac{1}{2}$. Here is a set: $X \subset \{a, b, c\}$. Here is a sum: $\sum_{i=1}^n i = \frac{n(n+1)}{2}$. TeX will put the sub and superscripts for a sum on top and bottom if you add the `displaystyle` command: $\sum_{i=1}^n i = \frac{n(n+1)}{2}$. If you put a double money sign, TeX centers things in a math environment on its own line:

$$\int e^x dx = e^x$$

Equation arrays can be nice for adding line numbers. Lines are ended with a double backslash. Ampersands can be used to format the equations so all of the = signs line up.

$$x = y \tag{1}$$

$$a = b + c \tag{2}$$

You will get a line number even if there is only one thing in the eqn array:

$$P = Q \tag{3}$$

Here's how to not get a line number:

$$\begin{aligned} 3n^2 &= 10y \\ 53 &= 7x \end{aligned} \tag{4}$$

TeX will probably hyphenate this if it would help make the text line up more nicely: Pneumonoultramicroscopicsilivolcaniconiosis

Here is an itemized list

1. Foo
2. Bar

Here is a bulleted list

- Foo
- Bar

Here is an example of how to format psuedocode (this is how it is done in the CLR algorithms text book):

PAIR-SET-TO-TRUNCATIONS($n, m, \{(s_1, p_1), (s_2, p_2), \dots, (s_n, p_n)\}$)

```
1 for  $i \leftarrow 1$  to  $n$ :
2     for  $t \leftarrow 1$  to  $m$ :
3         if  $S(s_i, t) = p_i$ :
4              $T[s_i] \leftarrow t$ 
```

2 Conclusion

2.1 TeX is suave

2.1.1 to the max