Appendix *B*

Spreadsheet Commands

Table B.1: List of Spreadsheet commands

Operation or Function	Mathematical Description	Command
addition	$11 + 12$	`=11+12`
subtraction	$29 - 21$	`=29-21`
multiplication	30×15	`=30*15`
division	$44/12$	`=44/22`
(combination of above)	$3 + \dfrac{4}{5 \times 2} - 3 \times 7$	`=3+4/(5*2)-(3*7)`
square root	$\sqrt{5}$ or $\sqrt{7 \times (5/3)}$	`=sqrt(5)` or `=sqrt(7*5/3)`
power	6^3 or $7^{0.5}$	`=6^3` or `7^(0.5)`
the constant "pi"	π	`=pi()`
sum of numbers	$\sum a_i$	`=sum(...)`, where ... can be a list of cells
(example of sum)	`A1 + A2 + A3`	`=sum(A1,A2,A3)` or* `=sum(A1:A5)`

Table B.1 — continued from previous page

operation or function	mathematical description	command
mean value	$(\texttt{A1} + \texttt{A2} + \texttt{A3})/3$	=average(A1:A3)
standard deviation	$\sqrt{\dfrac{\sum(x_i - \bar{x})^2}{N - 1}}$	=stdev (series of cells)
sine	$\sin x$ or $\sin(2\pi x)$	=sin(x) or =sin(2*pi()*x)
cosine	$\cos x$	=cos(x)
arctangent (inverse tangent)	$\arctan x$ or $\tan^{-1} x$	=atan(x)

* This second option can be used when the spreadsheet command references cells in the same column and adjacent rows, or in the same row and adjacent columns. You can also combine methods of defining cells. For example, if you wanted to find the sum of the contents of cells B3 through B28, B32, and B40 through B100, the spreadsheet command you would use is =sum(B3:B28,B32,B40:B100)

Some other useful hints

- If in doubt, use parentheses to make sure things get calculated in the right order. For example, =3+5/2 results in 5.5. But, =(3+5)/2 results in 4. In the first case, it would be better to use =3+(5/2) in your spreadsheet program.

- Pushing the Ctrl+' keys will display the formulas for the entire spreadsheet (the backquote (') is to the left of the number 1 on the US keyboard). Pressing these two keys again reverts back to the calculated numbers.

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