Cheatography
MATH1901_Final_CS Cheat Sheet
by s.sutherland697 via cheatography.com/50365/cs/13907/

| Sets |  |
| :--- | :--- |
| $\in$ | "Is an element of..." |
| $\cup$ | Union |
| $\cap$ | Intersection |
| $\not \subset$ | "Is NOT a subset of... |
| $\subset$ | "Is proper subset of..." (some |
| $\subseteq$ | or all) |
| $\varnothing$ | Emp a subset of..." (some) |
| $A$ | Complement |
| Set Builder | \{formula for elements <br> Not. |


| Logic |  |
| :--- | :--- |
| $\wedge$ | Conjunction (AND) |
| $\vee$ | Disjunction (OR) |
| $\sim$ | Negation (NOT) |
| $\rightarrow$ | "If $x$, THEN y" |
| $\leftrightarrow$ | True with same value |

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| Probability/Statistics |  |
| :---: | :---: |
| Permutatio ns | $P(n, r)=n!/((n-r)!)$ |
| Combinati ons | $C(n, r)=n!/(n-r)!r!$ |
| Sample <br> Space | Set of all possible outcomes |
| $\mu$ (Mean) | Sum of set divided by length of set |
| $\sigma^{2}$ <br> (Variance) | Calculate the mean For each number, subtract the mean and square the result Calculate the average of the squared differences, or sum up the squared differences and divide by N , the number of values. |
| $\sigma$ <br> (Standard <br> Deviation) | Square Root of Variance ( $\sigma^{2}$ ) |


| Boolean Algebra |  |
| :---: | :---: |
| + | $=\mathrm{V}$ |
| . | $=\Lambda$ |
| T | $=1$ |
| F | $=0$ |
| $(A+B)$ | Parallel Circuit |
| (A•B) | Series Circuit |
| Probability/Statistics |  |
| $\mathrm{b}=\text { Binomial }$ <br> Probability | $\begin{aligned} & b(x ; n, P)=n C x P x(1- \\ & P)(n-x) \end{aligned}$ |
| $\mathrm{n}=$ number of trials |  |
| $\mathrm{x}=$ number of successes |  |
| $\mathrm{P}=$ probability of success |  |
| Binomial <br> Distribution | $\mu=n \cdot P$ |
| (cont'd) | $\sigma^{2}=\mathrm{n} \cdot \mathrm{P} \cdot(1-\mathrm{P})$ |

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