MATH-338 Final Cheat Sheet [Exam 1]

TERMS

Probability Model: a mathematical representation of a random event. **Sample Space:** a range of values of a random variable. **Probability:** a quantifiable amount for the likelihood of an event occurring. **Independent:** one event does not influence another. **Disjoint:** the probability of two specific events occurring is 0. **Neither (example):** a person does not eat red meat & is vegetarian. **Both (example):** because you passed your driver's test, you have a driver's license. **PMF:** $P(X = x) \rightarrow$ mapped value. **:** ¡++¿

FORMULAS

- $\mu_x = \Sigma x \cdot p(x)$ [expected value]
- $\sigma_x^2 = \Sigma[x^2 \cdot P(x)] - \mu_x^2$ [variance]
- $\sigma_x = \sqrt{\Sigma[x^2 \cdot P(x)] - \mu_x^2}$ [standard devitation]
- $E(X \pm Y) = E(X) \pm E(Y)$ [expected value [**trans**]]
- $Var(X \pm Y) = Var(X) \pm Var(Y)$ [variance [**trans**]]
- $e = mc^2$
- ¡++¿
- ¡++¿
- ¡++¿
- ¡++¿
- ¡++¿
- ¡++¿

- ¡++¿