**Time Value of Money:**  
FV is future value  
PV is present value  
r is interest rate  
n is number of periods

**Logical Fallacies**Equivocation - using the same word with multiple senses in the same argument  
Begging the question - argument's proof relies on already accepting its conclusion as true   
Gambler's fallacy - assuming outcomes of independent random events change likelihood of each other   
Ad hominem - attacking the arguer rather than the argument  
Appeal to authority - stating that an authority figure says it's true so it must be  
Appeal to consequences - distracting with positive or negative consequences   
Appeal to emotion - manipulating emotions instead of using valid reasoning  
Straw man fallacy - counter-arguing against a different argument than the one being put forward   
False dilemma (false dichotomy) - relying on there being only two alternatives when there are more than these two   
Hasty generalization - too quickly starting from false info and assuming it applies generally

**Project Management**  
KPI Attributes: Predictive, Measurable, Actionable, Relevant, Few in number

**Annuity (stream of equal cash flows)**

**Net Present Value (NPV)**

**Internal Rate of Return (IRR)**The compounding rate of return (rIRR), aka discount rate, that will result in an NPV of zero

**Minimum Acceptable Rate of Return (MARR)**Aka hurdle rate, is rate of return that must be earned for a project to be accepted, so IRR > MARR

**Current and Real Dollars**Current dollars – value of money in the year it is received  
Real dollars – value of money after adjustment for inflation

**Supply and Demand**Chart, line chart

Description automatically generated  
Elasticity – how responsive a market is to change  
(swap Qs with Qd for demand)

**Confidence Interval**

μ = population mean, or “true mean”  
x = sample mean  
z = critical value, or the "z-score" value  
σ = standard deviation  
n = number of observations in sample  
α = significance level, or 1-(desired confidence level)

**Z-scores**

zα/2 values for following confidence intervals

|  |  |
| --- | --- |
| 85% | 1.440 |
| 90% | 1.645 |
| 95% | 1.960 |
| 97% | 2.170 |
| 98% | 2.326 |
| 99% | 2.576 |
| 99.7% | 2.968 |