

Matrices

Matrix Manipulations AT: Transpose of A - Switch Rows with Columns (R1 becomes C1, R2 becomes C2 etc.)

$$-A = -1 \cdot A$$

A^{-1} : Inverse of A

$$A^{-1} \cdot I = I = A \cdot I$$

Augment Identity matrix to matrix and perform Gauss-Jordan elimination on both to get change Identity matrix to the Inverse.

EROs: Switch Rows Scale Row (Multiply entire row) Add multiple of different row to another

A matrix A is in row echelon form if

1. The nonzero rows in A lie above all zero rows (when there is at least a nonzero row and a zero row). 2. The first nonzero entry in a nonzero row (called a pivot) lies to the right of the pivot in the row immediately above it

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Linear Functions

Slope-Intercept Formula: $y=mx+b$

Point-Slope: $y-y_1=m(x-x_1)$

Slope Formula: $(m)=\text{rise/run}$ OR $m=(y_2-y_1)/(x_2-x_1)$

Standard Form: $Ax + By = C$

Note that b is equal to y, the b value is where the line crosses on the y-axis when x is equal to zero

Systems of Equations

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Equilibrium Point: $Q_s = Q_d$, Supply=Demand

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