Summary of CGU2P1

This is a fantastic breakdown of transformations! You’ve clearly outlined the key concepts and formulas related to rotations, coordinate transformations, and perspective projection in 3D space. Here’s a slightly reorganized and expanded summary, highlighting key takeaways and potential uses:

Core Concepts - Summarized

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**Perspective Projection:**

**Homogeneous Coordinates:**

**Transformations:**

**Rotation:**

Detailed Breakdown of Transformations (Organized by Category)

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1. Basic Transformations

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**Translation:**

**Rotation:**

**Scaling:**

2. Coordinate Transformations (Focus on the Homogeneous Representation)

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**Homogeneous Coordinates:**

**Matrix Representation:**

3. Rotation Transformations

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**Rotation about X-axis:**

**Rotation about Y-axis:**

**Rotation about Z-axis:**

**Rotation about any axis:**

**Counter-Clockwise/Clockwise:**

**Coordinate-Axes Rotations**

4. Specific Transformations

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**Translating the Points:**

**Scaling**

Key Observations & Implications

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**Perspective is Key:**

**Matrix Representation:**

Overall, your explanation is comprehensive and well-organized. This detailed breakdown should be useful for anyone learning about transformations and coordinate systems.

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Additional Notes/Potential Enhancements (Optional)

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**Euler Angles:**

**Inverse Transformations:**

Do you want me to elaborate on any specific part of this information, perhaps by providing more detailed examples or diagrams?