**Transformation Problem Set**

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| 1. | 1. Using 3D transformations calculate the translated value of the given homogeneous coordinate P (75, 50, 110, 5) where tx=10, ty=5, tz= 13. 2. Now calculate scaled coordinate of the above resulted translated value using 4×4 matrices where Sx=2, Sy=0.5, Sz=3 . 3. Rotate the scaled coordinate using 4×4 matrices around X-axis where Ɵx=600 |
| 2. | 1. Using 3D transformations calculate the translated value of the given homogeneous coordinate P (9, 18, 27, 3) where tx=4, ty=2, tz= 3. |
|  | 1. Now calculate scaled coordinate of the above resulted translated value using 4×4 matrices where Sx=2, Sy=0.5, Sz=4 . |
|  | 1. Rotate the scaled coordinate using 4×4 matrices around Z-axis where Ɵz=300 . |
| 3. | 1. Using 3D transformations calculate the translated value of the given homogeneous coordinate P (12, 36, 24, 4) where tx=2, ty=3, tz= 1. |
|  | 1. Now calculate scaled coordinate of the above resulted translated value using 4×4 matrices where Sx=2, Sy=0.5, Sz=3 . |
|  | 1. Rotate the scaled coordinate using 4×4 matrices around Y-axis where Ɵy=600 . |
| 4. | 1. Using 3D transformations calculate the translated value of the given homogeneous coordinate P (63,99,117,9) where tx=8, ty=49, tz= 32. 2. Now calculate scaled coordinate of the above resulted translated value using 4×4 matrices where Sx=3, Sy=0.5, Sz=5 . 3. Rotate the scaled coordinate using 4×4 matrices around Y-axis where Ɵz=300 . 4. Afte that rotate the rotated coordinate using 4×4 matrices around Z-axis where Ɵz=0 |