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|-------------------------------|-----------------------|--------------------------|--------------|--------------------------------|-------------|
| class | JVector3D | JVersor3D | JAngle3D | | |
| constructor | (x,y,z) | (dx,dy,dz) | (theta,phi) | | |
| implements | arithmetics | arithmetics ¹ | I/O | | |
| class | JPosition3D: | JDirection3D: | JRotation3D: | JQuaternion3D | JVersor3Z |
| | JVector3D | JVersor3D | JMatrix3D | | |
| constructor | (JVector3D) | (JVector3D) | (JAngle3D) | (theta,JVersor3D) ³ | (JVector2D) |
| | (JVersor3D) | (JVersor3D) | | (theta,JVector3D) ³ | (dx,dy) |
| | (JAngle3D) | (JAngle3D) | | | |
| conversion² | JVersor3D | JVector3D | | JVector3D | JVector3D |
| | JAngle3D | JAngle3D | | JVersor3D | JVersor3D |
| | | | | | JAngle3D |
| implements | rotate(JRotation3D) | rotate(JRotation3D) | | arithmetics | arithmetics |
| | rotate(JQuaternion3D) | rotate(JQuaternion3D) | | I/O | I/O |
| | I/O | I/O | | | |

¹only negate

²note implicit conversion to base class

³defines rotation operation