SPHERICAL COORDINATE CONVERSIONS

Convert from spherical, (ρ,θ,φ), to rectangular, (x,y,z), coordinates.

1. $(1,0,0)$

2. $(3,0,\pi)$

3. $(1,\pi/6,\pi/6)$

4. $(2,\pi/2,3\pi/4)$

5. $(4,\pi/4,\pi/6)$

Convert from rectangular, (x,y,z), to spherical, (ρ,θ,φ), coordinates.

6. $(-3,0,0)$

7. $(1,1,\sqrt{2})$

8. $(\sqrt{3},0,1)$

9. $(-\sqrt{3},-3,-2)$

10. $(1,-1,-\sqrt{2})$