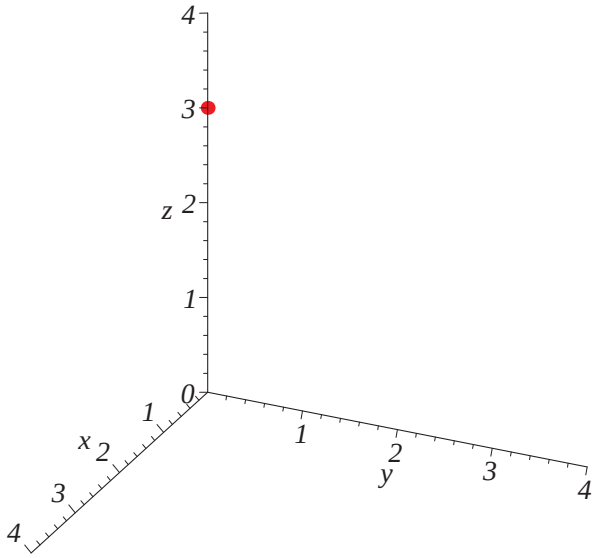
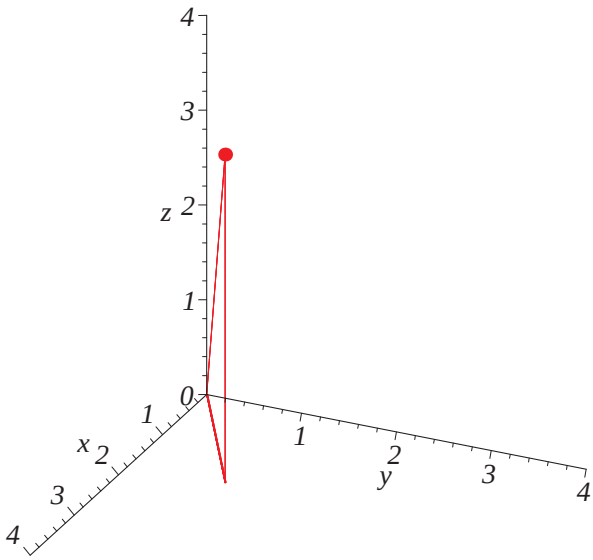
(a) $x = \rho \sin\phi \cos\theta = (3)\sin(0)\cos(0) = 0$,
$y = \rho \sin\phi \sin\theta = (3)\sin(0)\sin(0) = 0$, and
$z = \rho \cos\phi = (3)\cos(0) = 3$ so the point is
$(0, 0, 3)$ in rectangular coordinates.



(b) $x = \rho \sin\phi \cos\theta = (4)\sin(\frac{\pi}{6})\cos(\frac{\pi}{6}) = \sqrt{3}$,
$y = \rho \sin\phi \sin\theta = (4)\sin(\frac{\pi}{6})\sin(\frac{\pi}{6}) = 1$, and
$z = \rho \cos\phi = (4)\cos(\frac{\pi}{6}) = (2)\sqrt{3}$ so the point is
$\left(\sqrt{3}, 1, (2)\sqrt{3}\right)$ in rectangular coordinates.


4
3
z 2
1
0
1
x 2
3
4
1
2
y
3
4