

```

In[*]:= f1s[r_, tt_, ff_] := (1 / Sqrt[Pi]) Exp[-r]
f2s[r_, tt_, ff_] := (1 / Sqrt[32 Pi]) (2 - r) Exp[-r / 2]
f2px[r_, tt_, ff_] := (1 / Sqrt[32 Pi]) r Exp[-r / 2] Sin[tt] Cos[ff]
f3s[r_, tt_, ff_] := (1 / (81 Sqrt[3 Pi])) (27 - 18 r + 2 r^2) Exp[-r / 3]

```

```

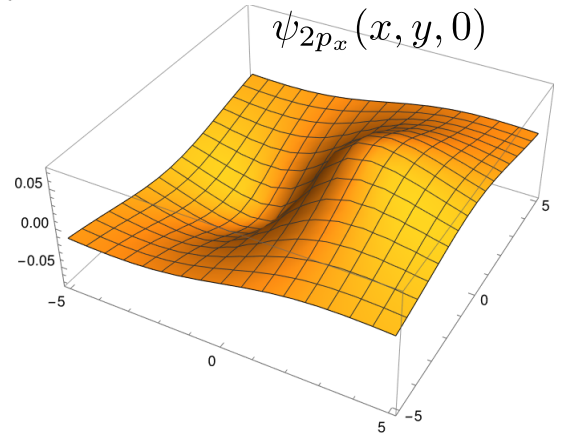
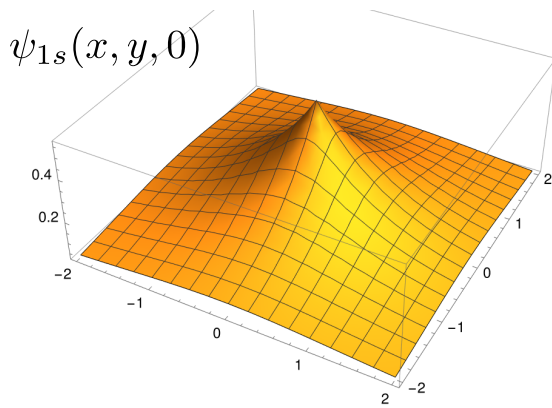
In[*]:= f1sc = TransformedField["Spherical" -> "Cartesian",
  f1s[r, tt, ff], {r, tt, ff} -> {x, y, z}]

```

```

In[*]:= Plot3D[f1sc[x, y, 0], {x, -2, 2}, {y, -2, 2}]

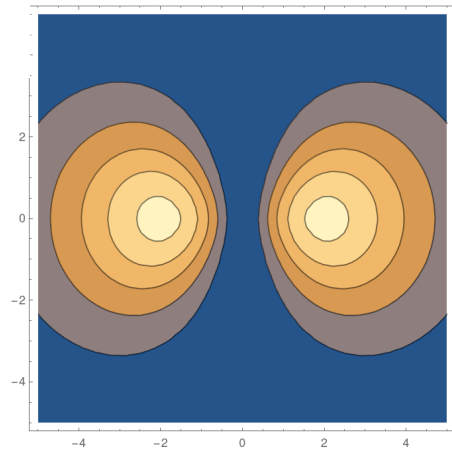
```



```

In[*]:= Plot3D[f2pxc[x, y, 0],
  {x, -5., 5.}, {y, -5, 5}]

```



$|\psi_{2p_x}(x, y, 0)|^2$

```

In[*]:= SphericalPlot3D[
  {f1s[1, tt, ff], f2s[1, tt, ff],
  f3s[1, tt, ff]}, {tt, 0, Pi},
  {ff, -0.75 Pi, 0.75 Pi}, PlotRange -> Full]

```

