In[1]:= **Expand[(x^2 - r^2 y^2)^2 (x^2 + y^2 / r^4)]**

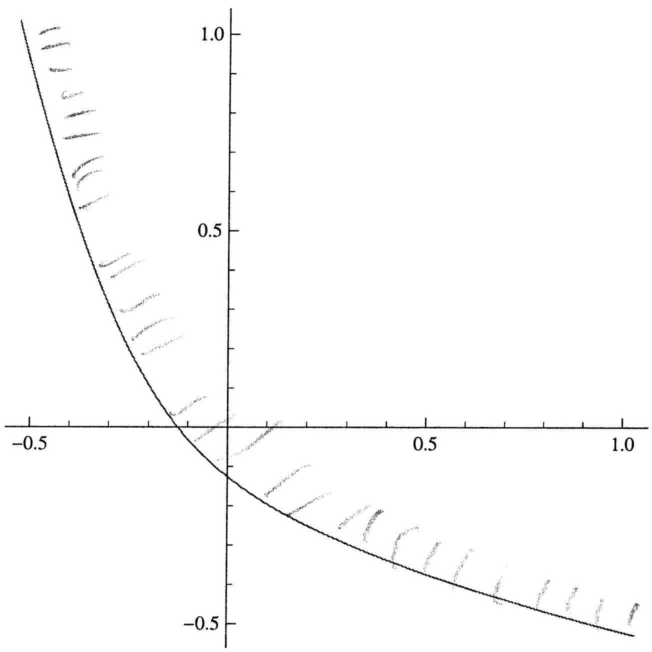
Out[1]= $x^6 + \frac{x^4 y^2}{r^4} - 2 r^2 x^4 y^2 - \frac{2 x^2 y^4}{r^2} + r^4 x^2 y^4 + y^6$

In[2]:= **Coefficient[%, {x^4 y^2, x^2 y^4}]**

Out[2]= $\left\{\frac{1}{r^4} - 2 r^2, -\frac{2}{r^2} + r^4\right\}$

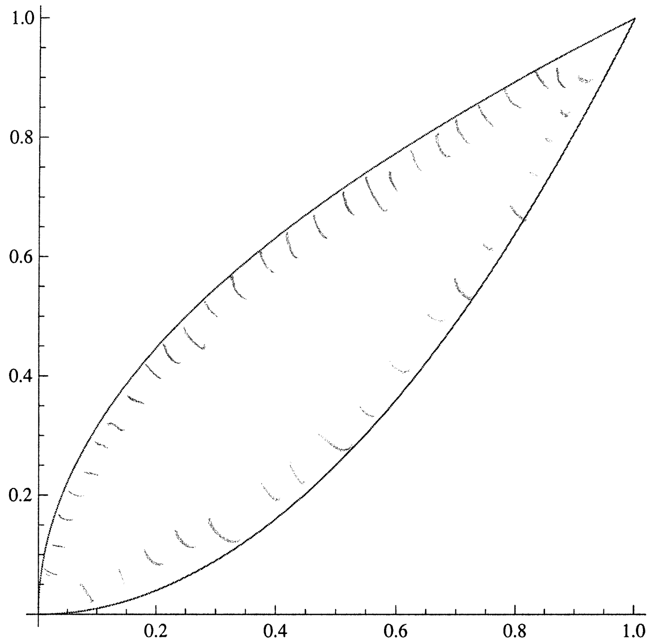
In[3]:= **ParametricPlot[%2 / 15, {r, .5, 2}]**

Out[3]=



The boundary of the section of P_{2,6}

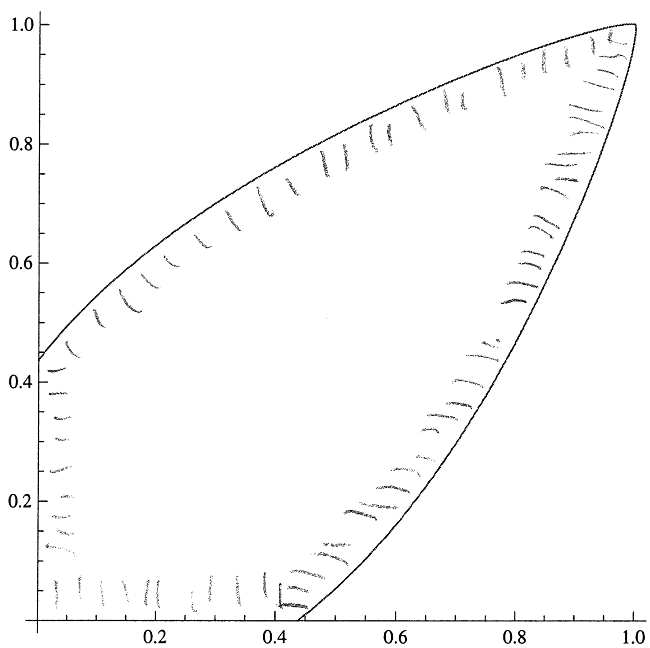
In[5]:=
```
Plot[{x^2, Sqrt[x]}, {x, 0, 1}, AspectRatio → 1]
```

Out[5]=


The two parabolas on the boundary of the section of Q_{2,6}

In[6]:=
```
Phi[r_] :=
  (1 - r) ^ (2 / 3) (1 + r) ^ (1 / 3) (1 + 2 r) / ((1 + 5 r + 10 r^2) ^ (2 / 3) (1 - 5 r + 10 r^2) ^ (1 / 3))
```

In[7]:=
```
ParametricPlot[{Phi[r], Phi[-r]}, {r, -1 / 2, 1 / 2}]
```

Out[7]=


The funny section of K_{2,6}; there are line segments along the axes from the origin to (a,0) and (0,a) with a^3 = 1/18. The point (1,1) has a tangent, but infinite curvature.