

■ $f = h + x(r - x) \rightarrow x^* = \frac{1}{2}(r + \sqrt{4h + r^2})$

```
ParametricPlot3D[{{r, h, 1/2 (r + Sqrt[4 h + r^2])}}, {r, h, 1/2 (r - Sqrt[4 h + r^2])}},
  {r, -3, 3}, {h, -3, 3},
  PlotLegends -> {"Positive roots", "Negative roots"}, {AxesLabel -> {r, h}}]
```

