In[14]:=
```
S = Solve[r * x + 4 x^3 - 9 x^5 == 0, x] // Flatten
```

Out[14]=
$$\left\{x \to 0,\ x \to -\frac{1}{3}\sqrt{2-\sqrt{4+9r}},\ x \to \frac{1}{3}\sqrt{2-\sqrt{4+9r}},\right.$$
$$\left. x \to -\frac{1}{3}\sqrt{2+\sqrt{4+9r}},\ x \to \frac{1}{3}\sqrt{2+\sqrt{4+9r}}\right\}$$

```
(* Lines *)
p1 = Plot[S[[1]][[2]], {r, -1, 0}, PlotStyle → Blue, AxesLabel → {r, x}];
p2 = Plot[S[[1]][[2]], {r, 0, 1}, PlotStyle → {Blue, Dashed}, AxesLabel → {r, x}];
p3 = Plot[S[[2]][[2]], {r, -1, 0}, PlotStyle → {Blue, Dashed}, AxesLabel → {r, x}];
p4 = Plot[S[[3]][[2]], {r, -1, 0}, PlotStyle → {Blue, Dashed}, AxesLabel → {r, x}];
p5 = Plot[S[[4]][[2]], {r, -1, 1}, PlotStyle → Blue, AxesLabel → {r, x}];
p6 = Plot[S[[5]][[2]], {r, -1, 1}, PlotStyle → Blue, AxesLabel → {r, x}];
```

Syntax: "{r, x ^ *" cannot be followed by "}".

In[128]:=
```
rc = -4 / 9;
bp1 = {rc, S[[2]][[2]] /. r → rc};
bp2 = {rc, S[[3]][[2]] /. r → rc};
pb = ListPlot[{bp1, bp2}, PlotMarkers → {Automatic, 10},
   PlotStyle → Blue, PlotLegends → {"Saddle-node bifurcation"}];
ps = ListPlot[{{0, 0}}, PlotMarkers → {Automatic, 10}, PlotStyle → Red,
   PlotLegends → {"Subcritical pitchfork bifuraction"}];
```

In[133]:=
```
Show[p1, p2, p3, p4, p5, p6, pb, ps, PlotRange → Full]
```

Out[133]=