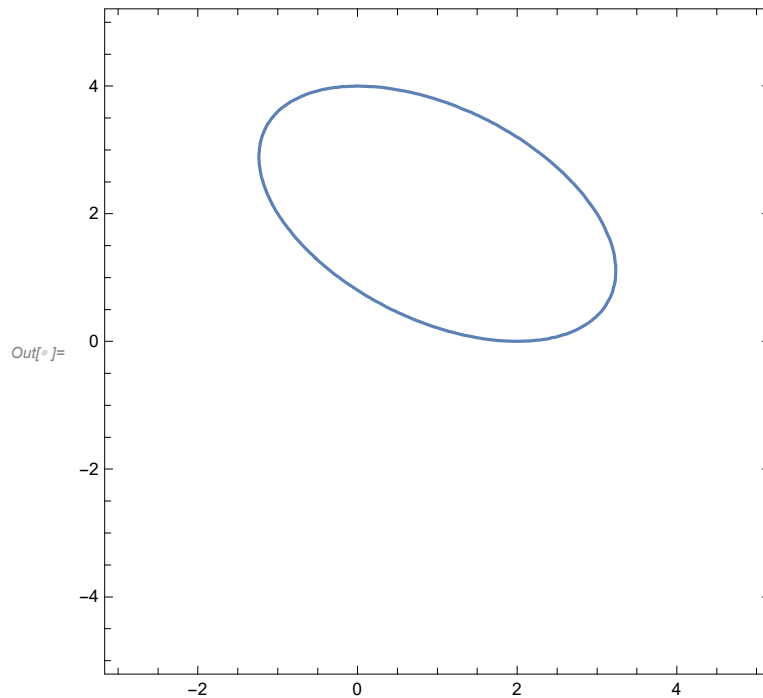


```
In[6]:= pol = w0 w2 (a α - α x + (b - a) y)^2 - 4 a w1^2 y (α x - b y) /. {a → 2, b → -1, α → 2}
```

```
Out[6]:= w0 w2 (4 - 2 x - 3 y)^2 - 8 w1^2 y (2 x + y)
```

```
In[7]:= f = pol /. {w0 → 1, w1 → 1, w2 → 2};
```

```
In[8]:= eli = ContourPlot[f == 0, {x, -3, 5}, {y, -5, 5}]
```

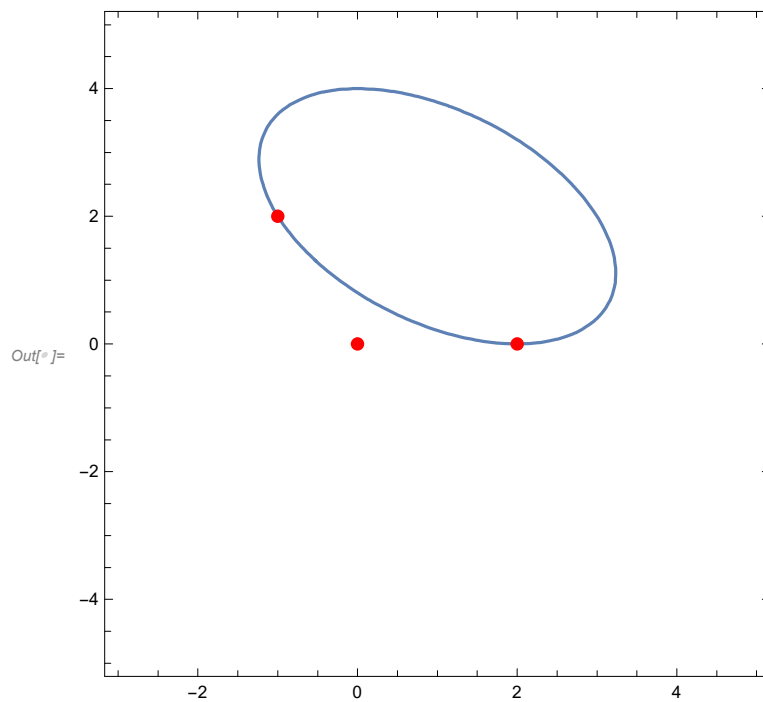


```
In[9]:= P0 = Graphics[{PointSize[Large], Red, Point[{2, 0}]}];
```

```
P1 = Graphics[{PointSize[Large], Red, Point[{0, 0}]}];
```

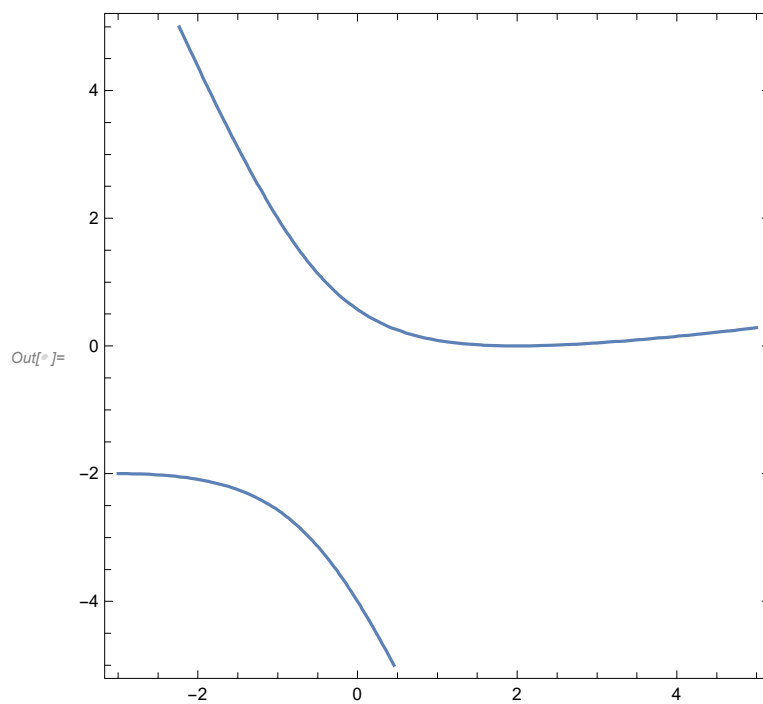
```
P2 = Graphics[{PointSize[Large], Red, Point[{-1, 2}]}];
```

In[]:= Show[eli, P0, P1, P2]

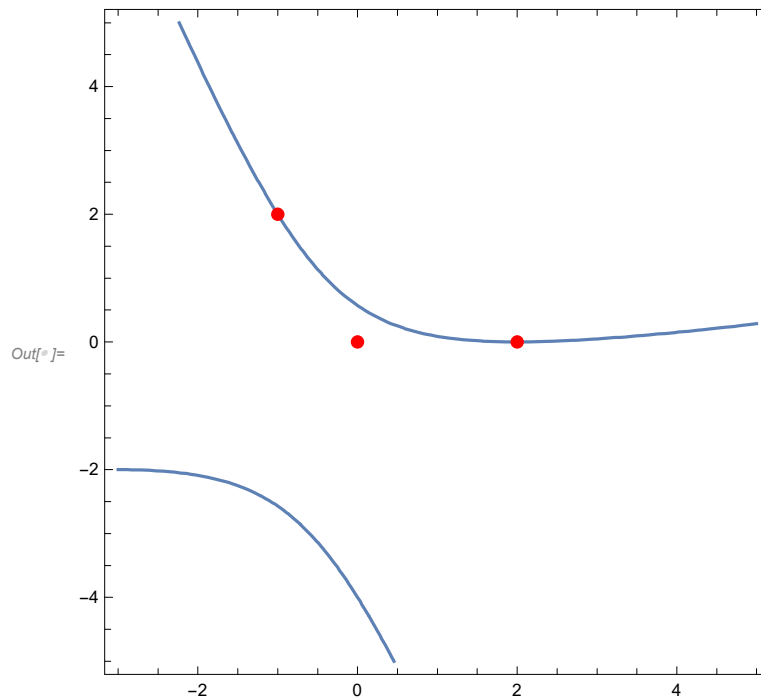


In[]:= f = pol /. {w0 → 1, w1 → 2, w2 → 2};

In[]:= hip = ContourPlot[f == 0, {x, -3, 5}, {y, -5, 5}]



In[]:= Show[h1p, P0, P1, P2]

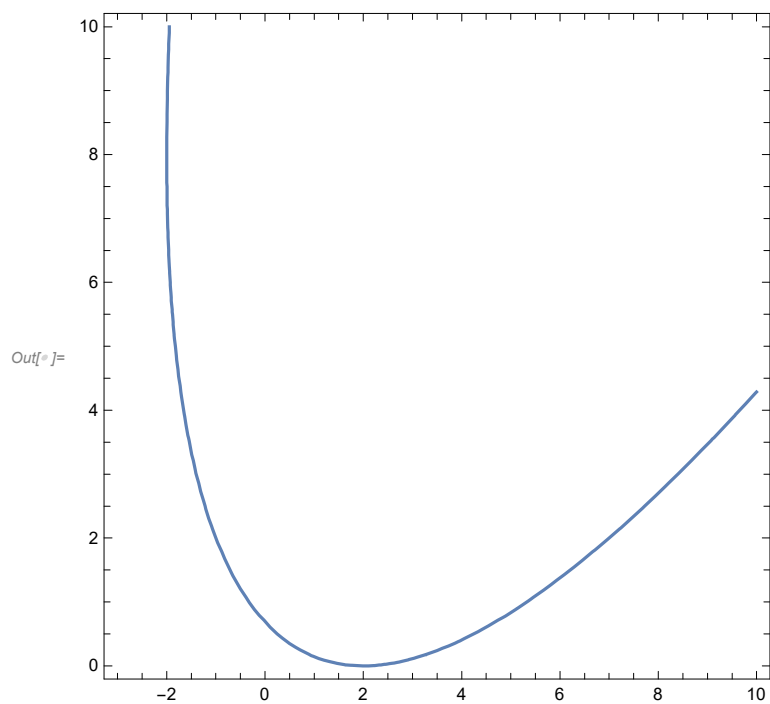


In[]:= f = pol /. {w0 -> 3, w1 -> $\sqrt{6}$, w2 -> 2} // Expand

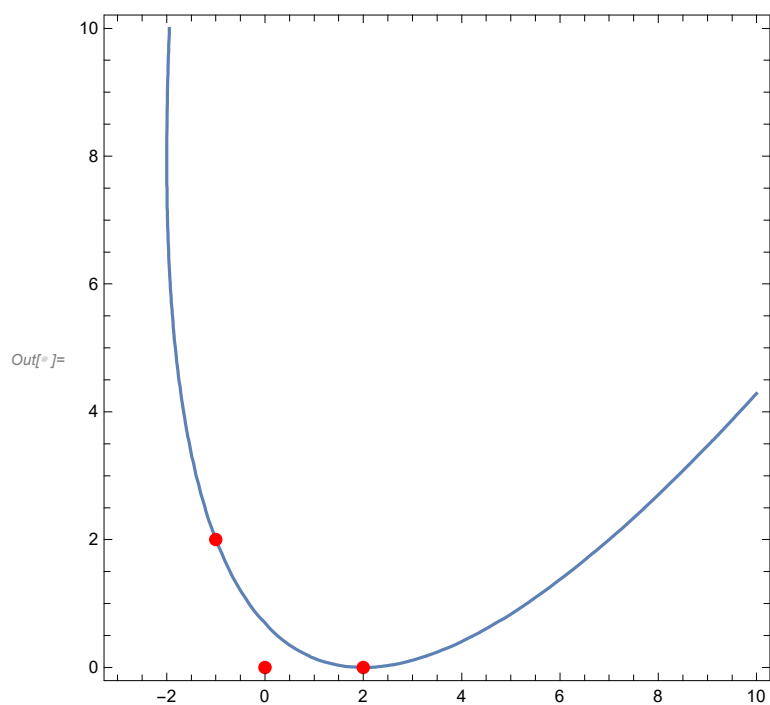
In[]:= $(96 - 96x + 24x^2 - 144y - 24xy + 6y^2) / 6$ // Expand

Out[]:= $16 - 16x + 4x^2 - 24y - 4xy + y^2$

```
In[6]:= par = ContourPlot[f == 0, {x, -3, 10}, {y, 0, 10}]
```



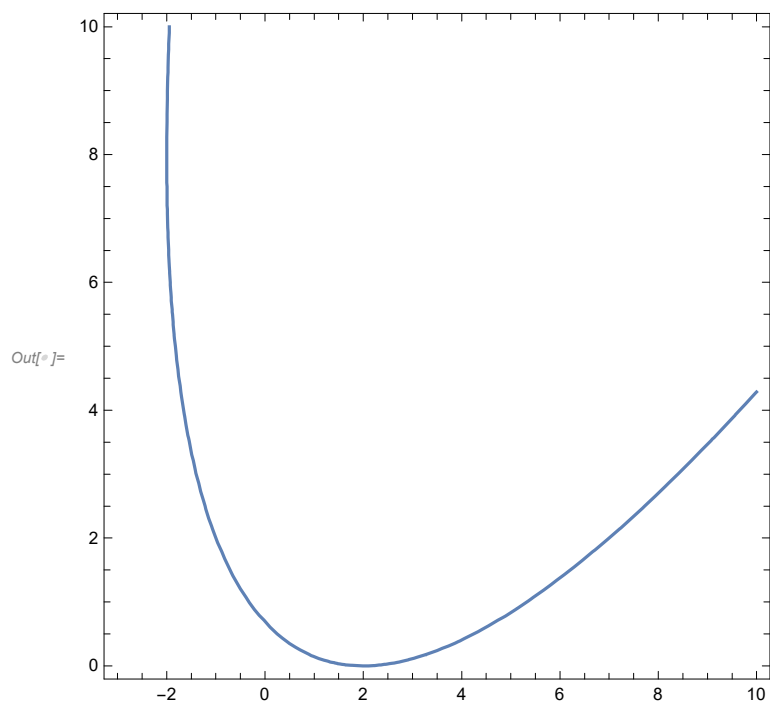
```
In[6]:= Show[par, P0, P1, P2]
```



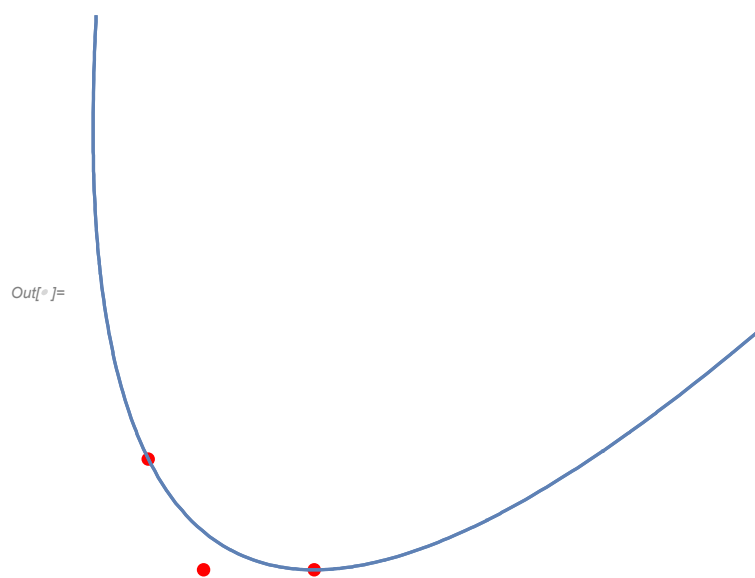
```
In[6]:= f = pol /. {w0 -> 1, w1 -> 1, w2 -> 1} // Expand
```

Out[6]= $16 - 16x + 4x^2 - 24y - 4xy + y^2$

```
In[6]:= bez = ContourPlot[f == 0, {x, -3, 10}, {y, 0, 10}]
```

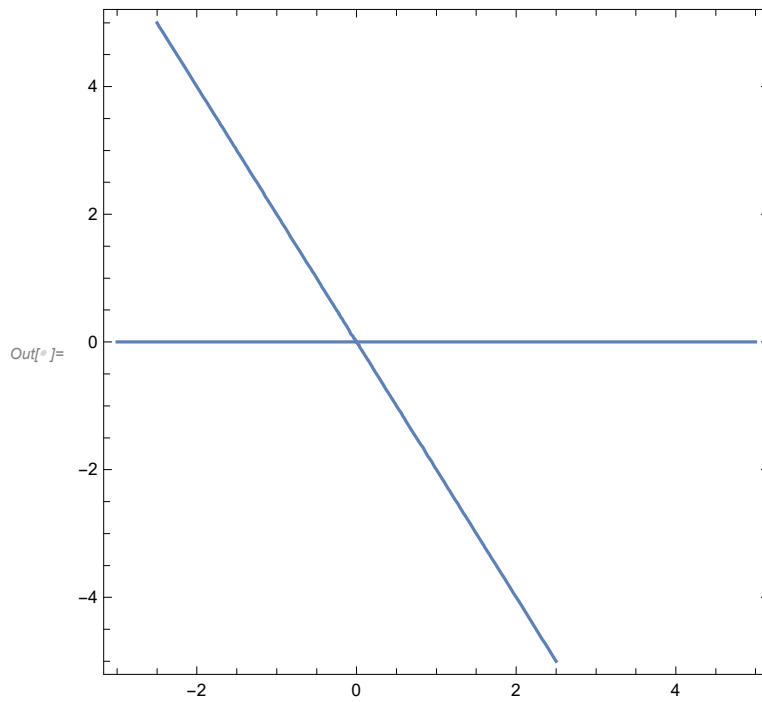


```
In[6]:= Show[P0, P1, P2, bez, par]
```

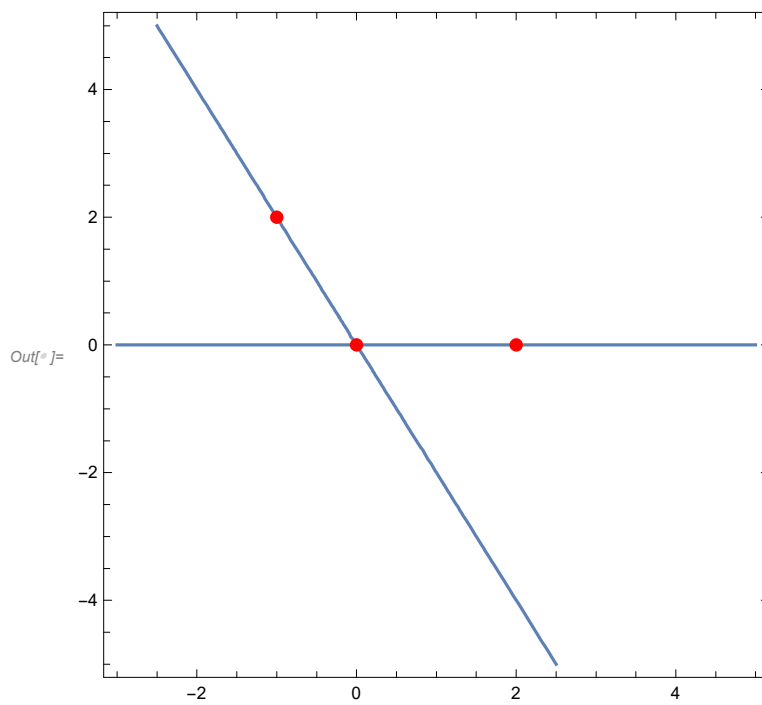


```
In[6]:= f = pol /. {w0 -> 0, w1 -> 1, w2 -> 2};
```

In[]:= **drconc = ContourPlot[f == 0, {x, -3, 5}, {y, -5, 5}]**



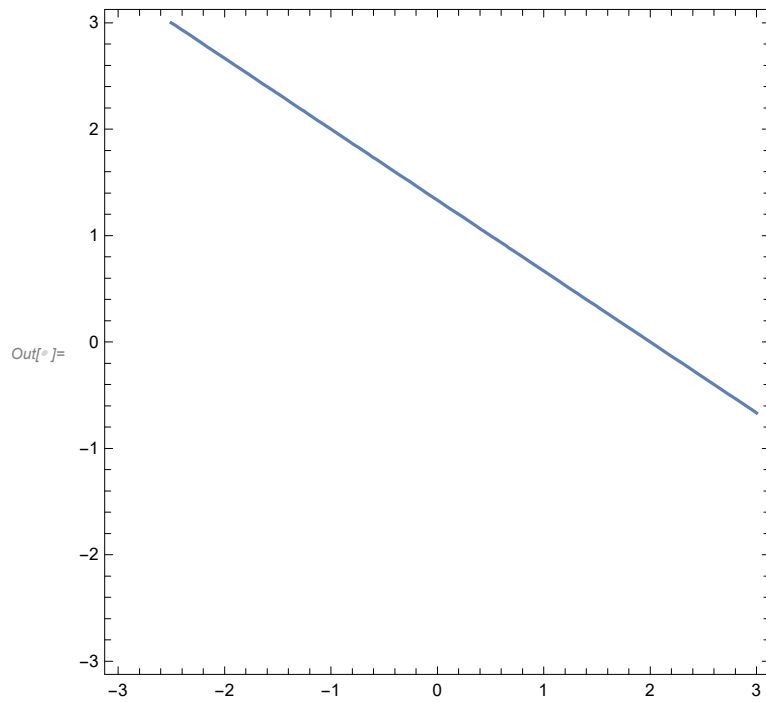
In[]:= **Show[drconc, P0, P1, P2]**



In[]:= **f = pol /. {w0 -> -3, w1 -> 0, w2 -> 1}**

Out[]:= $-3 (4 - 2x - 3y)^2$

In[6]:= **drdubla = ContourPlot**[$4 - 2x - 3y == 0$, {x, -3, 3}, {y, -3, 3}]



In[6]:= **Show**[drdubla, P0, P1, P2]

