

In[1]:=

```
SetOptions[Plot3D(*Or whichever plot you desire*),  
  ColorFunction → "Rainbow"(*One of many options*)];  
SetOptions[ContourPlot(*Or whichever plot you desire*),  
  ColorFunction → "Rainbow"(*One of many options*)];  
SetOptions[RegionPlot(*Or whichever plot you desire*),  
  ColorFunction → "BlueGreenYellow"(*One of many options*)];
```

In[ ]:= SetOptions[ContourPlot3D(\*Or whichever plot you desire\*),  
 ColorFunction → "BlueGreenYellow"(\*One of many options\*)];

(\*1\*)

□

```
In[107]:= f = 3 x^2 + 2 y^3 - 6 x y
```

```
h = {x, -5, 5}
```

```
j = {y, -5, 5}
```

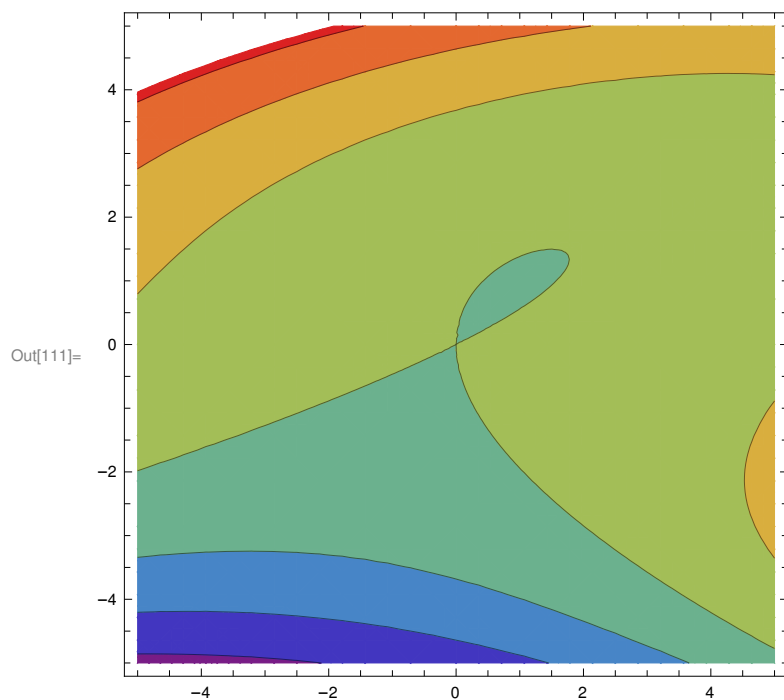
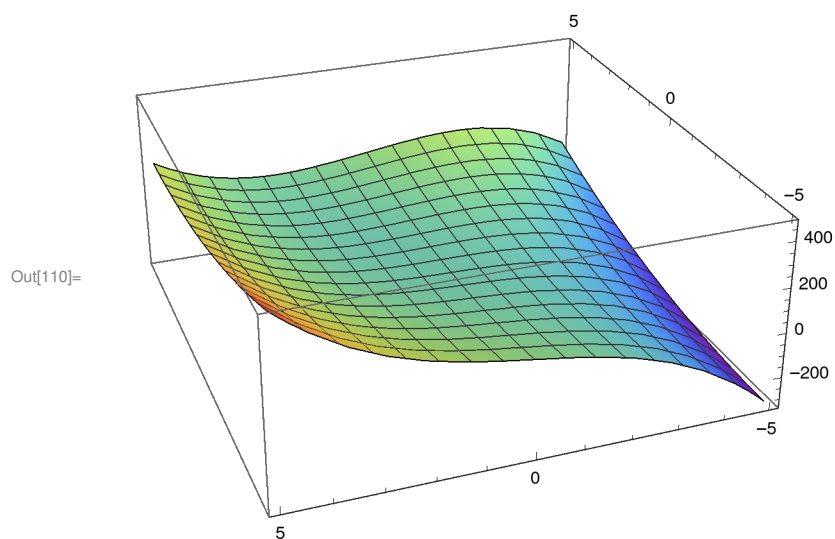
```
Plot3D[f, h, j]
```

```
ContourPlot[f, h, j]
```

```
Out[107]= 3 x^2 - 6 x y + 2 y^3
```

```
Out[108]= {x, -5, 5}
```

```
Out[109]= {y, -5, 5}
```



```
In[42]:= f = 3 x^3 y - 3 x y^3 + 8 y
```

```
h = {x, -10, 10}
```

```
j = {y, -10, 10}
```

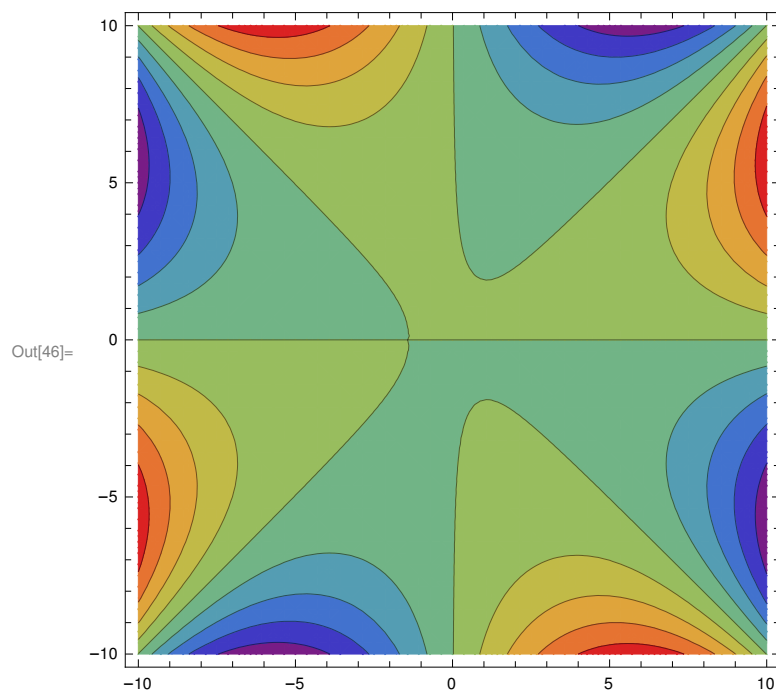
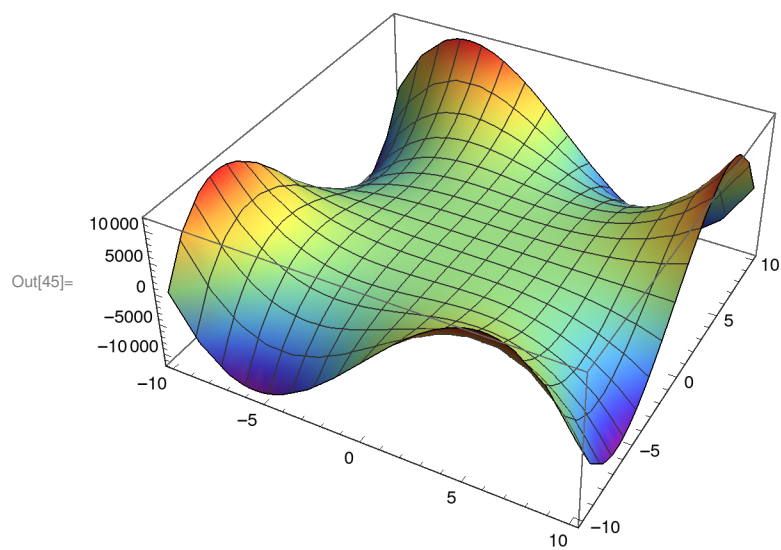
```
Plot3D[f, h, j]
```

```
ContourPlot[f, h, j]
```

```
Out[42]= 8 y + 3 x^3 y - 3 x y^3
```

```
Out[43]= {x, -10, 10}
```

```
Out[44]= {y, -10, 10}
```



```
In[112]:= f = 3 y^2 - 2 y^3 - 3 x^2 + 6 x y
```

```
h = {x, -5, 5}
```

```
j = {y, -5, 5}
```

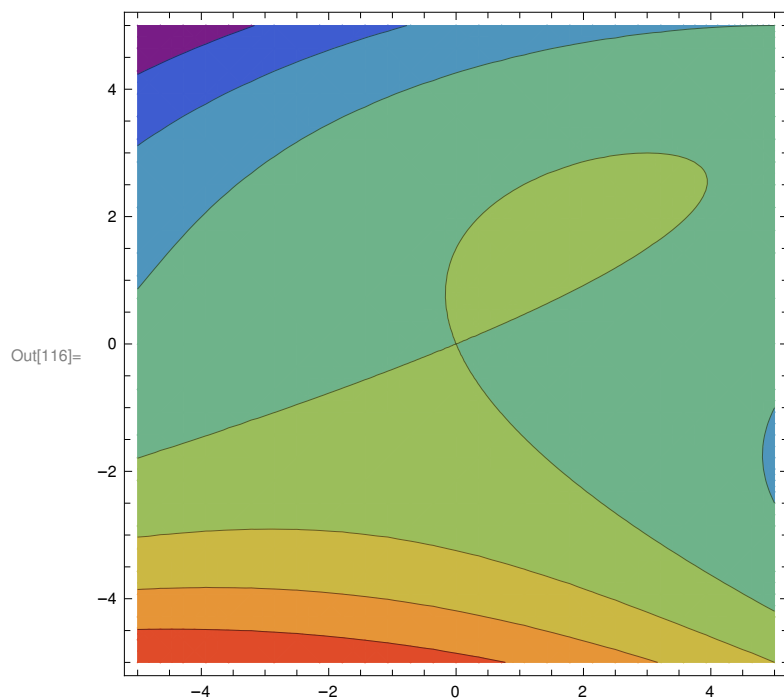
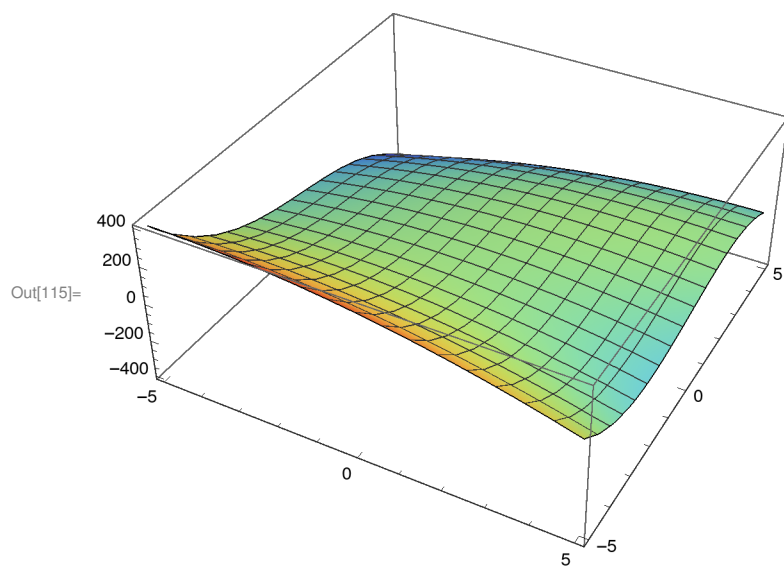
```
Plot3D[f, h, j]
```

```
ContourPlot[f, h, j]
```

```
Out[112]= -3 x^2 + 6 x y + 3 y^2 - 2 y^3
```

```
Out[113]= {x, -5, 5}
```

```
Out[114]= {y, -5, 5}
```



```
In[57]:= f = 2 x^3 + 9 x * y^2 + 15 x^2 + 27 y^2
```

```
h = {x, -10, 10}
```

```
j = {y, -10, 10}
```

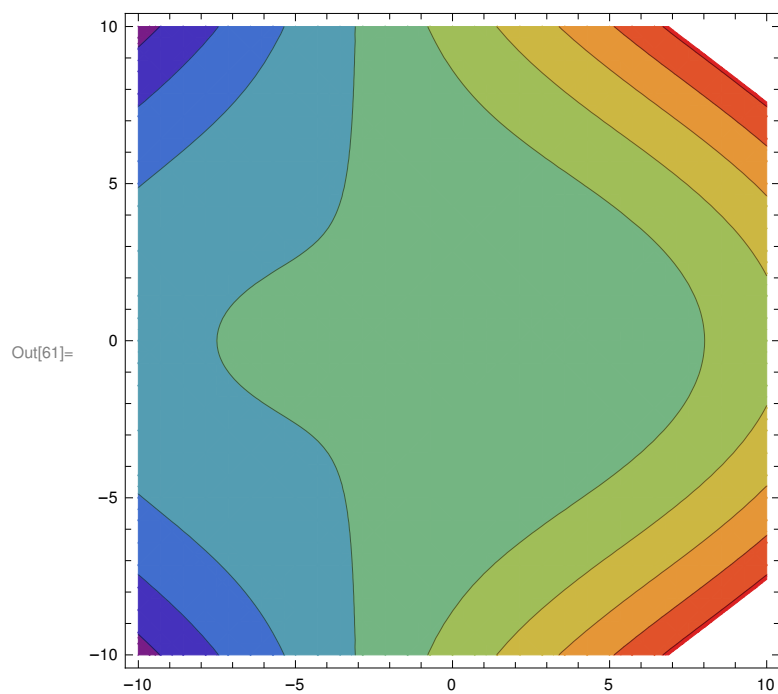
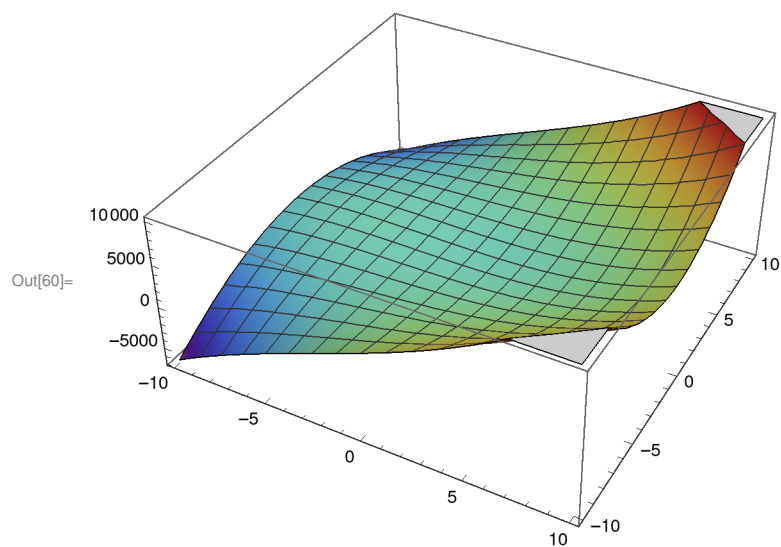
```
Plot3D[f, h, j]
```

```
ContourPlot[f, h, j]
```

```
Out[57]= 15 x^2 + 2 x^3 + 27 y^2 + 9 x y^2
```

```
Out[58]= {x, -10, 10}
```

```
Out[59]= {y, -10, 10}
```

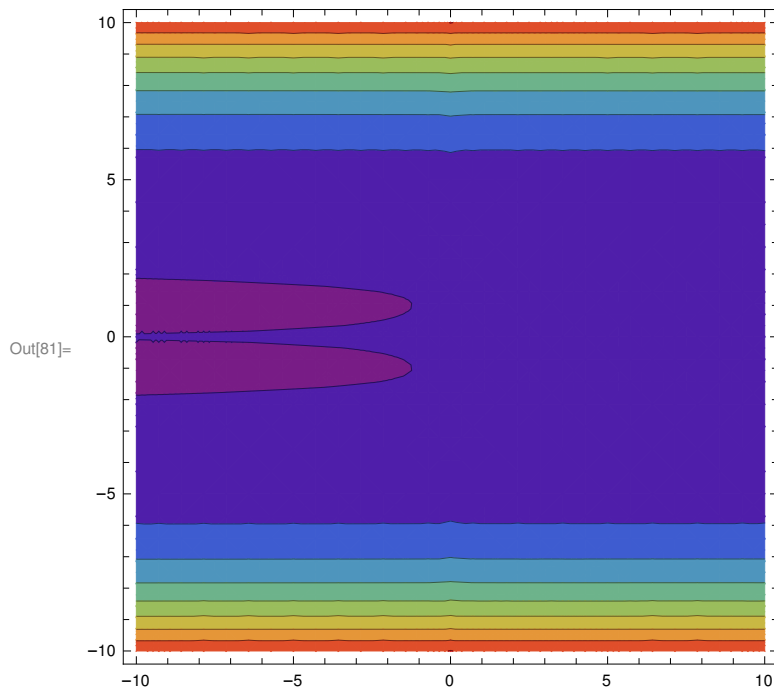
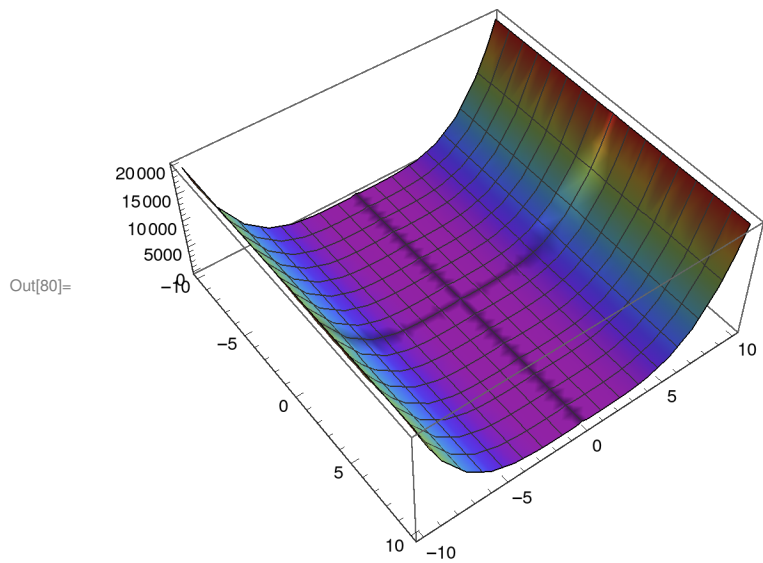


```
In[77]:= f = x + 2 y ^ 4 - Log[x ^ 4 y ^ 8]  
h = {x, -10, 10}  
j = {y, -10, 10}  
Plot3D[f, h, j]  
ContourPlot[f, h, j]
```

```
Out[77]= x + 2 y ^ 4 - Log[x ^ 4 y ^ 8]
```

```
Out[78]= {x, -10, 10}
```

```
Out[79]= {y, -10, 10}
```



```
In[117]:= f = Exp[x^2 - y] * (5 - 2 x + y)
```

```
h = {x, -5, 5}
```

```
j = {y, -5, 5}
```

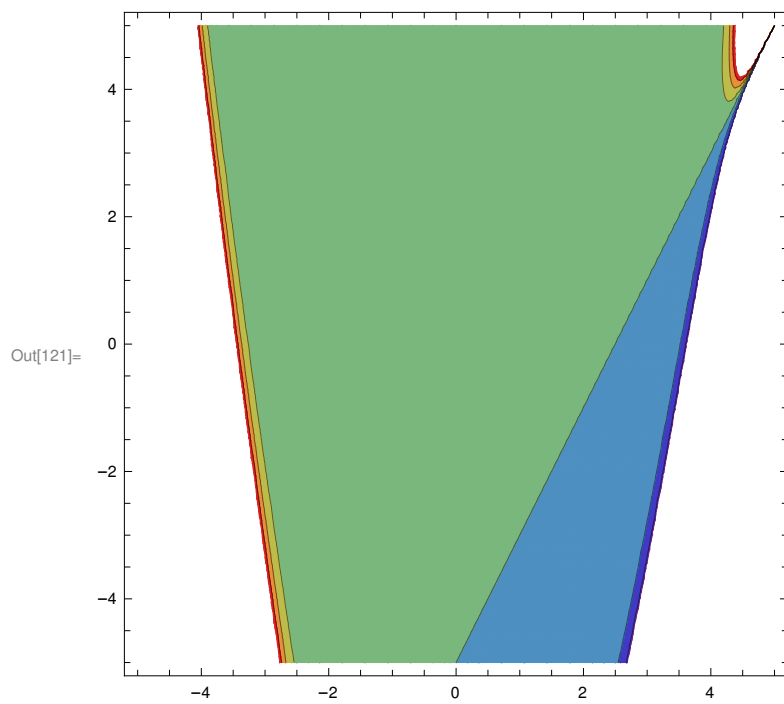
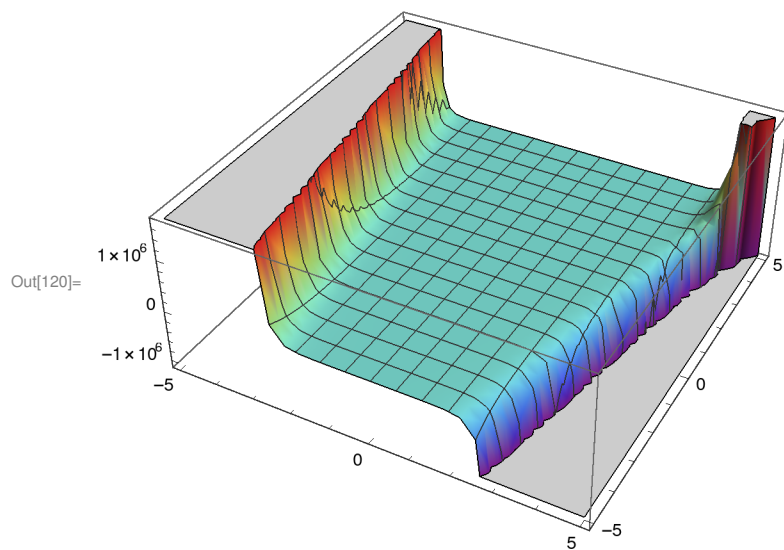
```
Plot3D[f, h, j]
```

```
ContourPlot[f, h, j]
```

```
Out[117]=  $e^{x^2 - y} (5 - 2x + y)$ 
```

```
Out[118]= {x, -5, 5}
```

```
Out[119]= {y, -5, 5}
```



(\*3\*)



```
In[97]:= f = 96 / (x * y) + 2 y + x + x * y
```

```
h = {x, -10, 10}
```

```
j = {y, -10, 10}
```

```
Plot3D[f, h, j]
```

```
ContourPlot[f, h, j]
```

```
Out[97]=  $x + \frac{96}{x y} + 2 y + x y$ 
```

```
Out[98]= {x, -10, 10}
```

```
Out[99]= {y, -10, 10}
```

