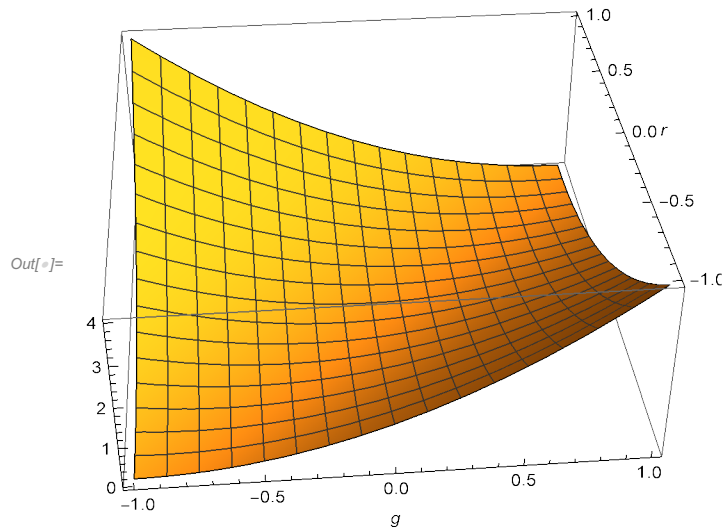


```

In[ ]:= Clear[x, y];
d = 1;
r = 1;
mse[g_, r_] := Total[(g - r)^2];
Plot3D[{mse[{g}, {r}]], {g, -d, d}, {r, -d, d}, AxesLabel -> Automatic]

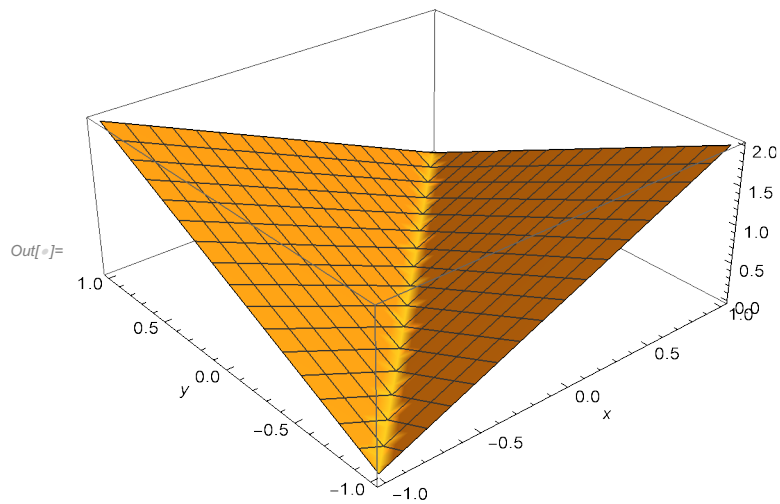
```



```

In[ ]:= (** Mean absolute error **)
mae[x_, y_] := Total[Abs[(x - y)]];
Plot3D[{mae[{x}, {y}]], {x, -d, d}, {y, -d, d}, AxesLabel -> Automatic]

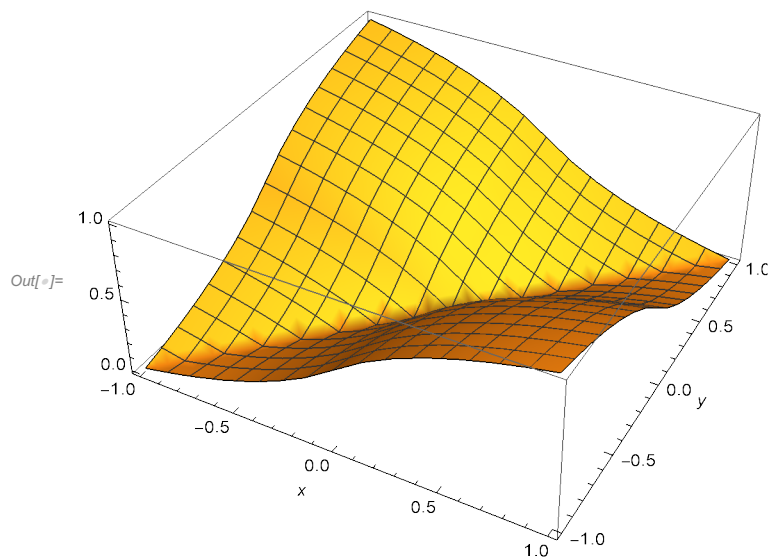
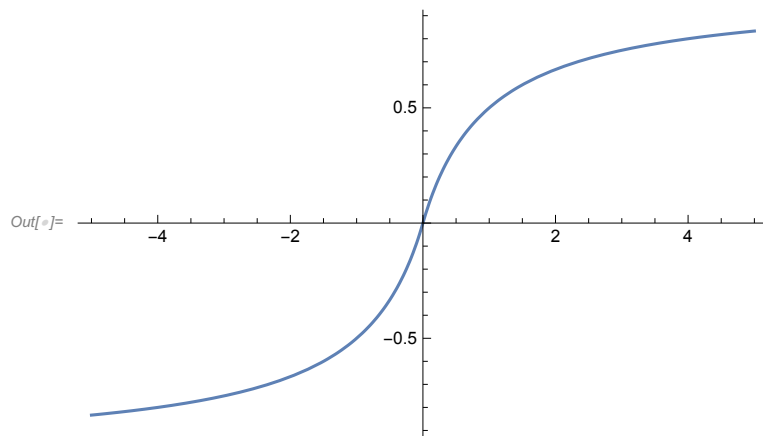
```



```

In[ ]:= softsign[x_] := x / (1 + Abs[x]);
Plot[softsign[x], {x, -5, 5}]
msedir[x_, y_] := mae[softsign[x], softsign[y]];
Plot3D[msedir[{x}, {y}], {x, -r, r}, {y, -r, r}, AxesLabel -> Automatic]

```

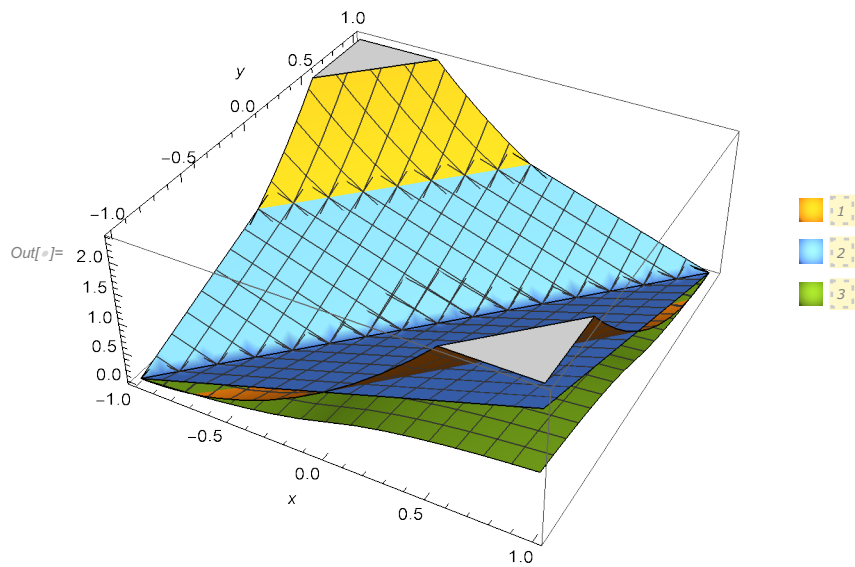


In[ ]:=

```

In[8]:= Plot3D[{mse[{x}, {y}], mae[{x}, {y}], msedir[{x}, {y}]},
  {x, -r, r}, {y, -r, r}, AxesLabel → Automatic, PlotLegends → Automatic]

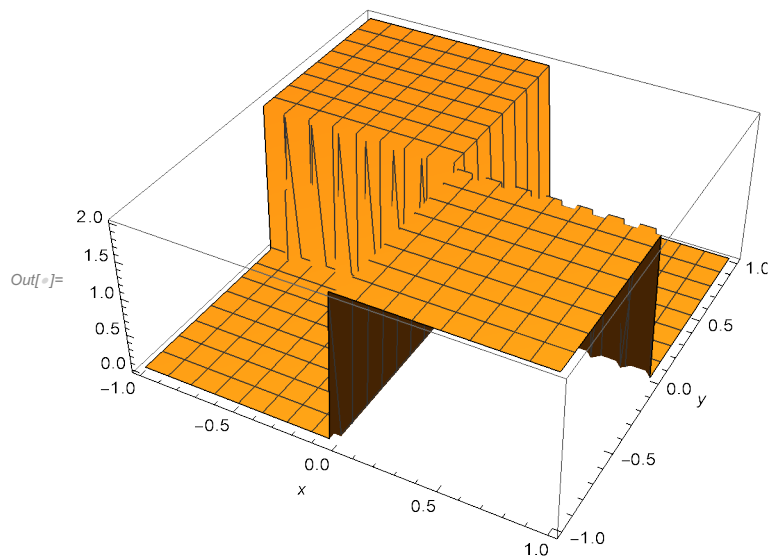
```



```

In[9]:= l2_norm[x_] := x / Norm[{x}];
cs[x_, y_] := 1 - x / Norm[{x}] * y / Norm[{y}];
Plot3D[cs[{x}, {y}], {x, -r, r}, {y, -r, r}, AxesLabel → Automatic]

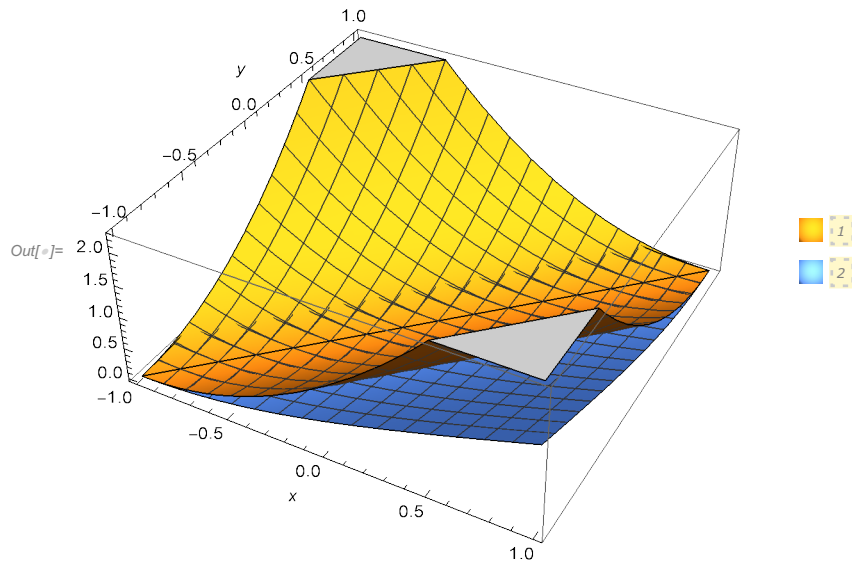
```



```

In[ ]:= logcos[x_, y_] := Log[(Exp[x - y] + Exp[-x + y]) / 2]
Plot3D[{mse[{x}, {y}], logcos[x, y]}, {x, -r, r},
{y, -r, r}, AxesLabel -> Automatic, PlotLegends -> Automatic]

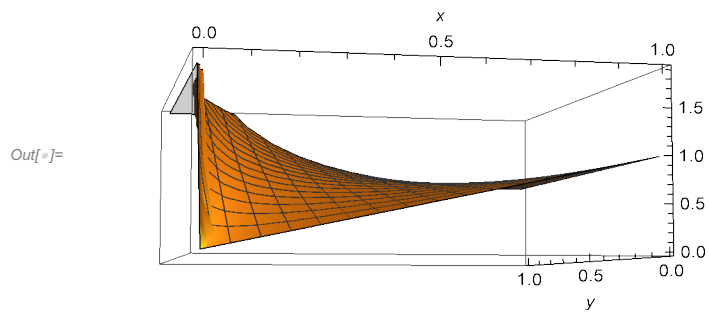
```



```

In[ ]:= poisson[x_, y_] := x - y * Log[x];
Plot3D[poisson[{x}, {y}], {x, 0, 1}, {y, 0, 1},
AxesLabel -> Automatic, PlotLegends -> Automatic]

```



```
In[*]:= mress[x_, y_] := mae[x, y] * (1 + mae[softsign[x], softsign[y]]);  
Plot3D[mress[{x}, {y}], {x, -r, r}, {y, -r, r}, AxesLabel -> Automatic]
```

