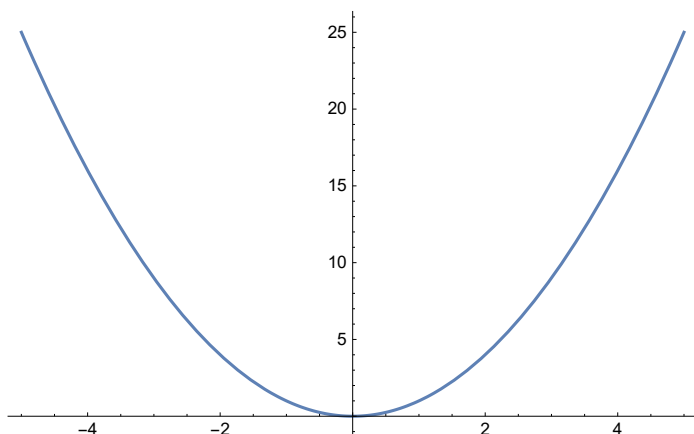


1. Parabola

In[1]:= **Plot**[x^2 , { x , -5, 5}]

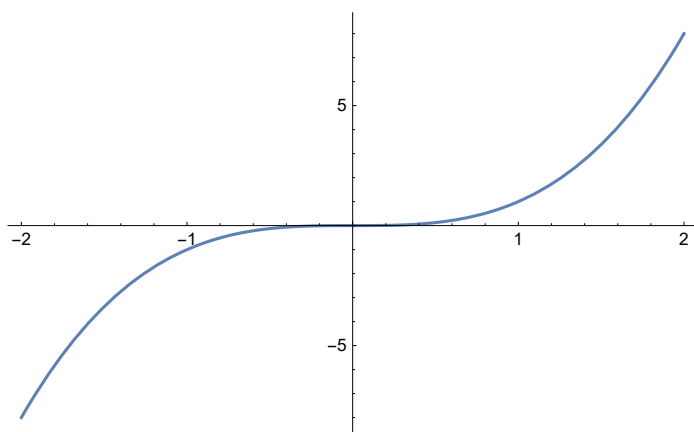
Out[1]=



2. Kubiskā parabola

In[2]:= **Plot**[x^3 , { x , -2, 2}]

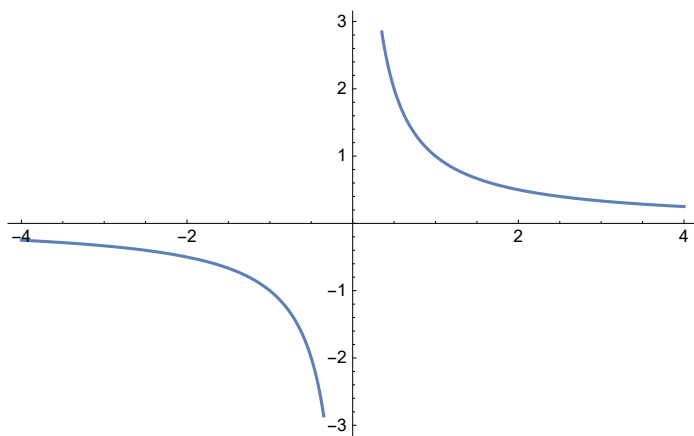
Out[2]=



3. Vienādsānu hiperbola

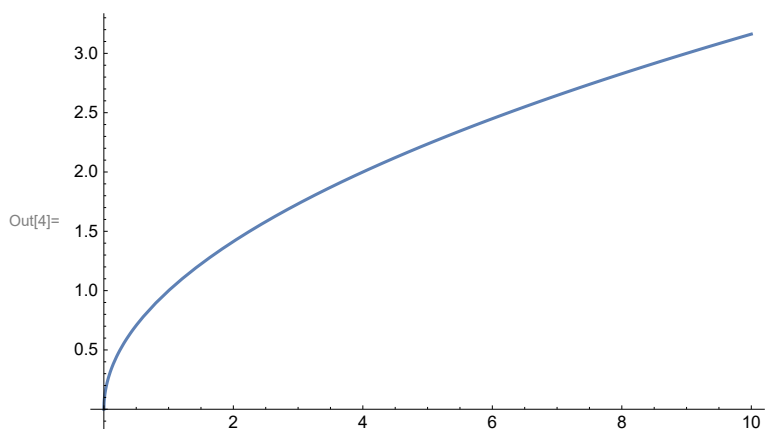
In[3]:= **Plot**[$1/x$, { x , -4, 4}]

Out[3]=



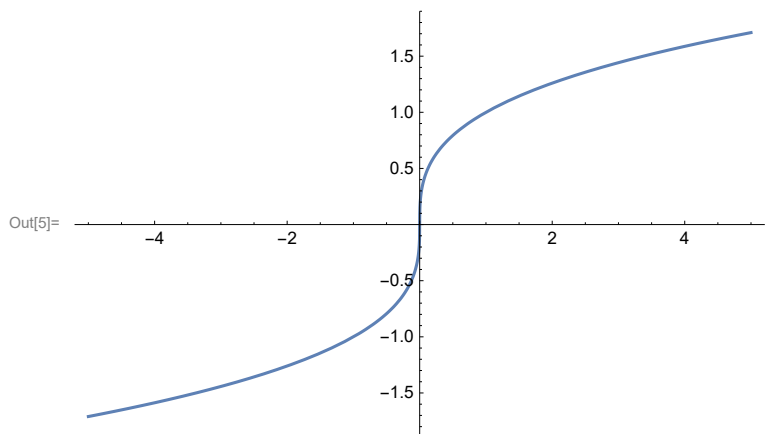
4. Parabola (augšējais zars)

In[4]:= **Plot[Sqrt[x], {x, 0, 10}]**



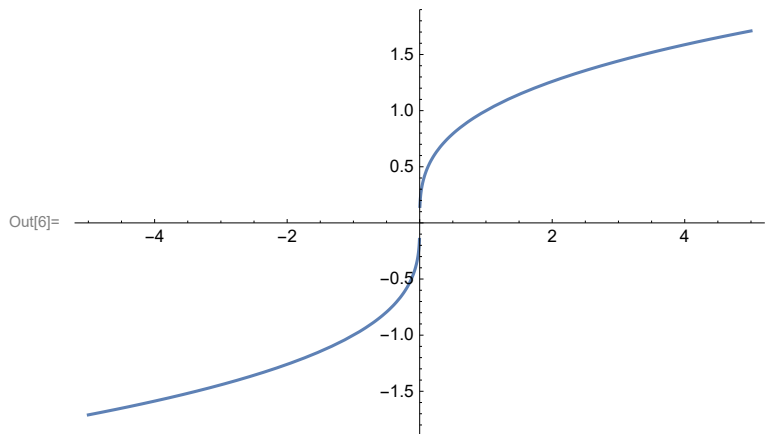
5. Kubiskā parabola

In[5]:= **Plot[CubeRoot[x], {x, -5, 5}]**



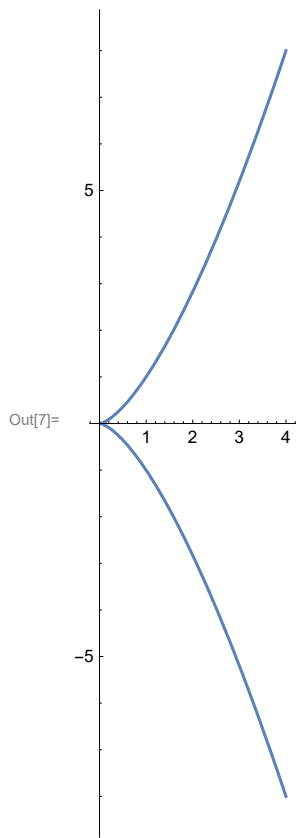
vai

In[6]:= **Plot[Sign[x] * Abs[x]^(1/3), {x, -5, 5}]**



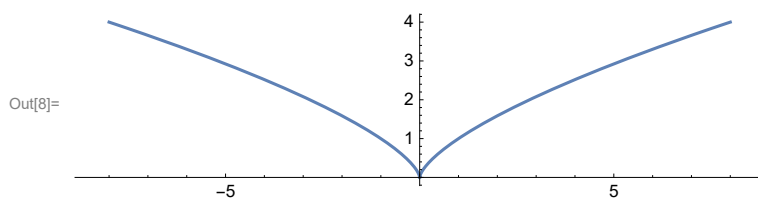
6. Puskubiskā parabola

In[7]:= **ParametricPlot**[{t^2, t^3}, {t, -2, 2}]



7. Neila parabola

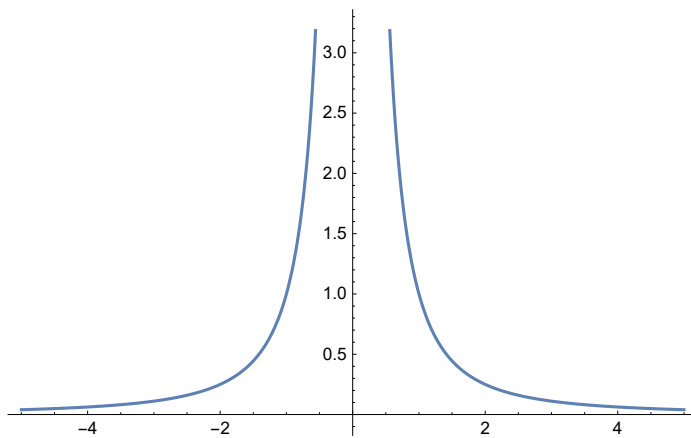
In[8]:= **ParametricPlot**[{t^3, t^2}, {t, -2, 2}]



8. Daiļveida funkcijas grafiks

```
In[9]:= Plot[1/x^2, {x, -5, 5}]
```

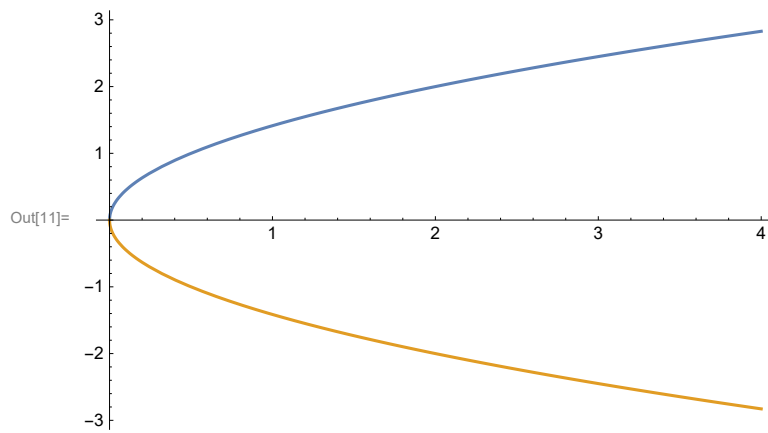
Out[9]=



9. Parabola

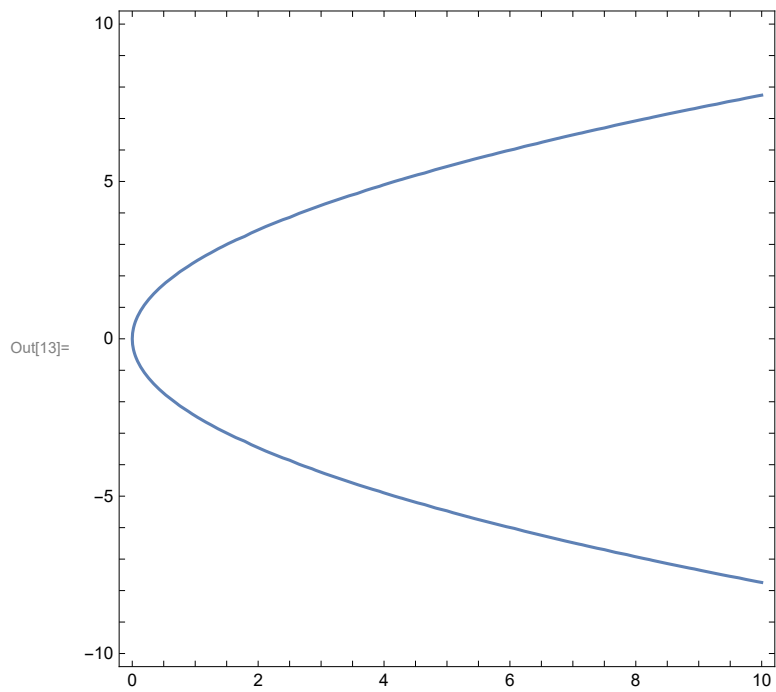
```
In[10]:= p = 1  
Plot[{Sqrt[2 * p * x], -Sqrt[2 * p * x]}, {x, 0, 4}]
```

Out[10]= 1



```
In[12]:= p = 3  
ContourPlot[y^2 == 2 p * x, {x, 0, 10}, {y, -10, 10}]
```

Out[12]= 3



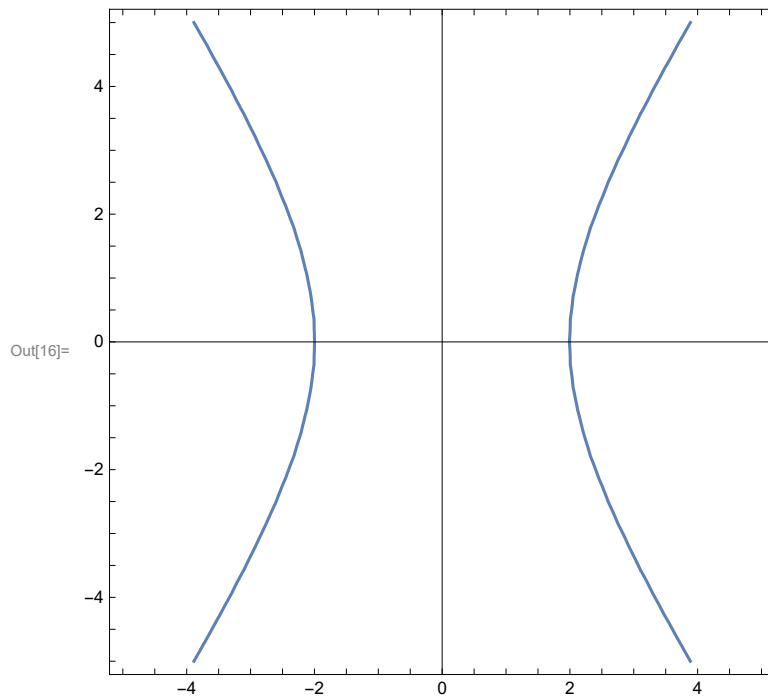
10. Hiperbola

```
In[14]:= a = 2  
b = 3
```

Out[14]= 2

Out[15]= 3

In[16]:= **ContourPlot** $[x^2/a^2 - y^2/b^2 == 1, \{x, -5, 5\}, \{y, -5, 5\}, \text{Axes} \rightarrow \text{True}]$

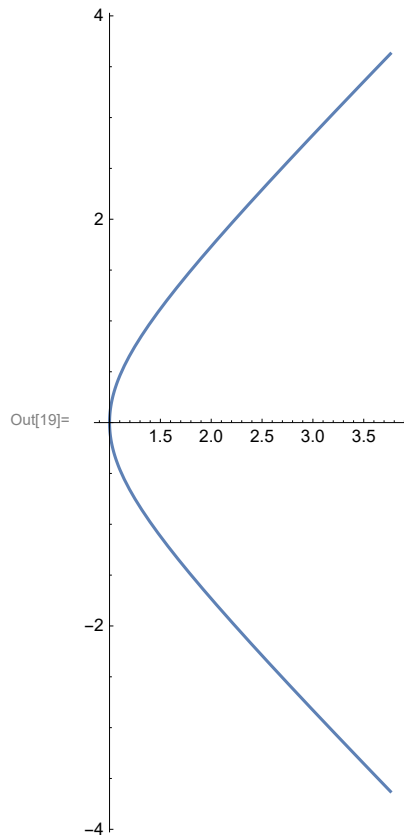


Labajam zaram

```
In[17]:= a = 1  
b = 1  
ParametricPlot[{a * Cosh[t], b * Sinh[t]}, {t, -2, 2}]
```

Out[17]= 1

Out[18]= 1

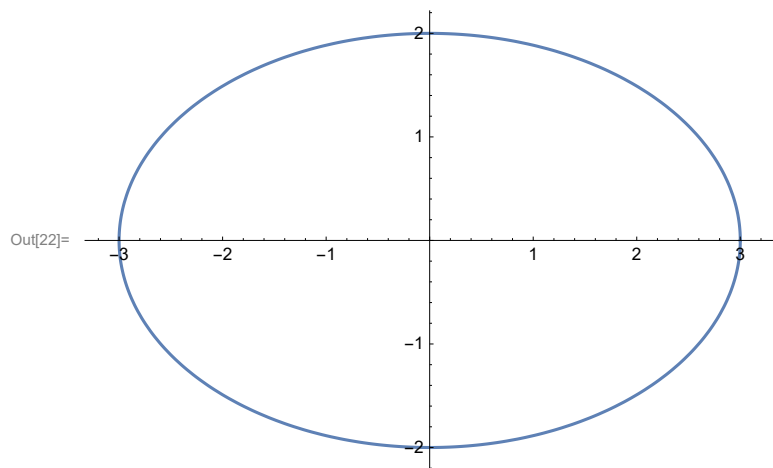


11. Ellipse

```
In[20]:= a = 3
          b = 2
          ParametricPlot[{a * Cos[t], b * Sin[t]}, {t, 0, 2 Pi}]
```

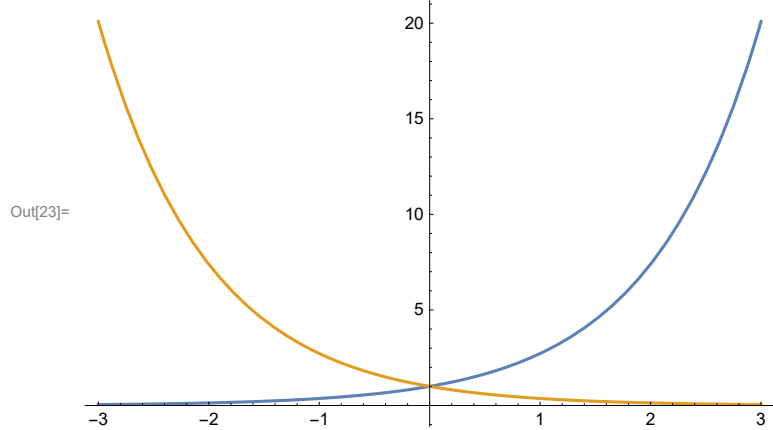
Out[20]= 3

Out[21]= 2



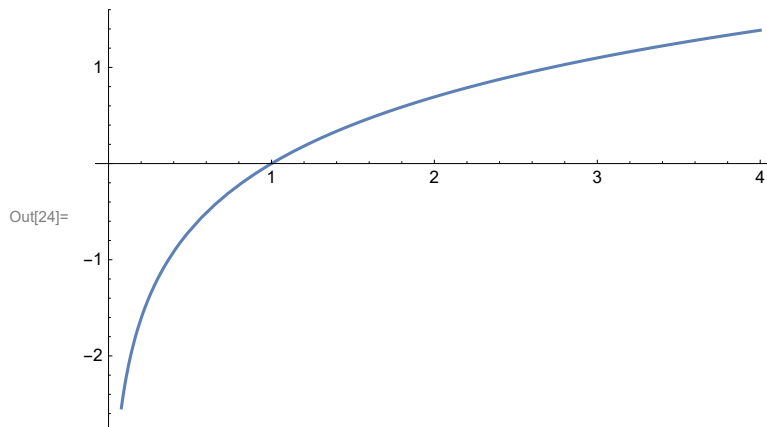
12. Eksponentfunkciju grafiki

```
In[23]:= Plot[{e^x, e^-x}, {x, -3, 3}]
```



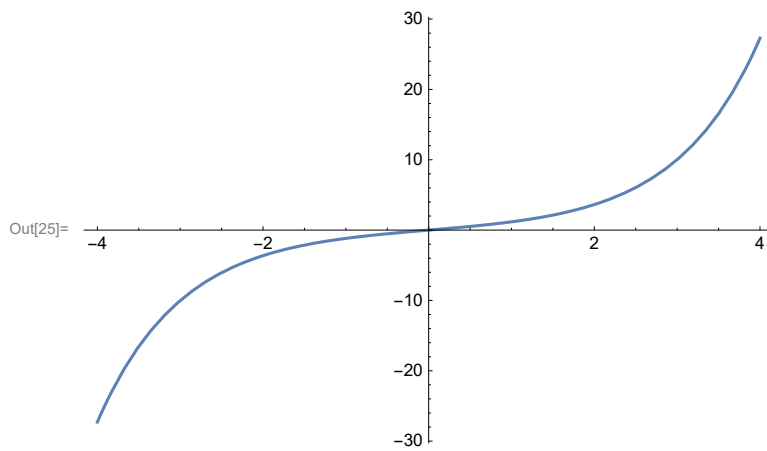
13. Logaritmiskā līkne

In[24]:= **Plot**[{**Log**[e, x]}, {x, 0, 4}]



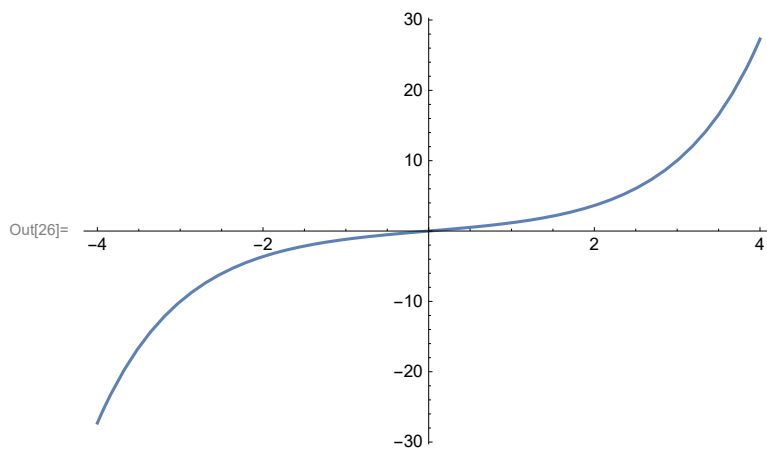
14. Hiperbolisko funkciju grafiki

In[25]:= **Plot**[{**Sinh**[x]}, {x, -4, 4}]



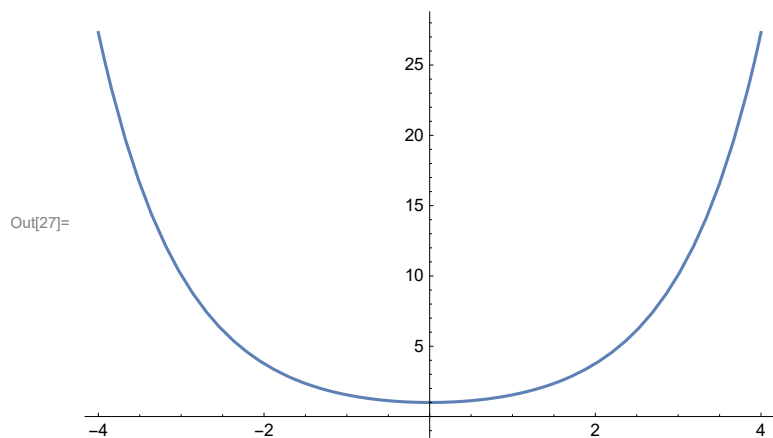
vai

In[26]:= **Plot**[{ $\frac{e^x - e^{-x}}{2}$ }, {x, -4, 4}]



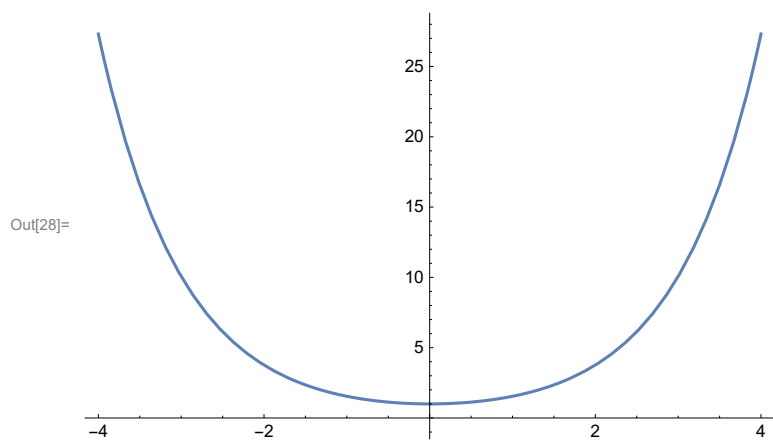
15. Hiperbolisko funkciju grafiki

In[27]:= **Plot**[{**Cosh**[x]}, {x, -4, 4}]



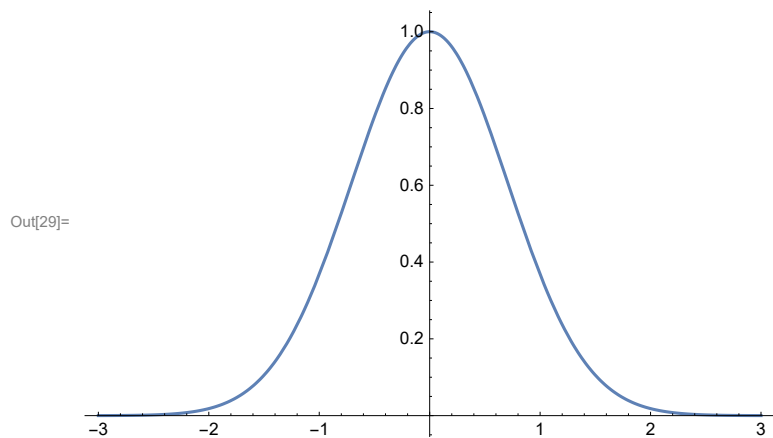
vai

In[28]:= **Plot**[{ $\frac{e^x + e^{-x}}{2}$ }, {x, -4, 4}]



16. Varbūtību līkne

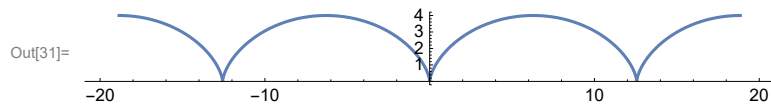
In[29]:= **Plot**[{ e^{-x^2} }, {x, -3, 3}]



17. Cikloīda

In[30]:= **a = 2**
ParametricPlot[{a * (t - Sin[t]), a * (1 - Cos[t])}, {t, -3 Pi, 3 Pi}]

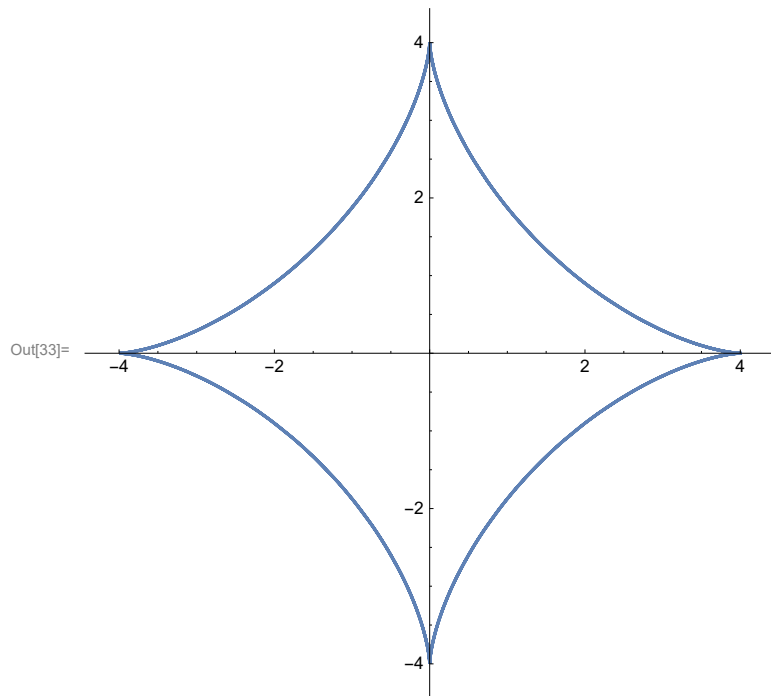
Out[30]= 2



18. Astroīda

In[32]:= **a = 4**
ParametricPlot[{a * (Cos[t]^3), a * (Sin[t]^3)}, {t, -4 Pi, 4 Pi}]

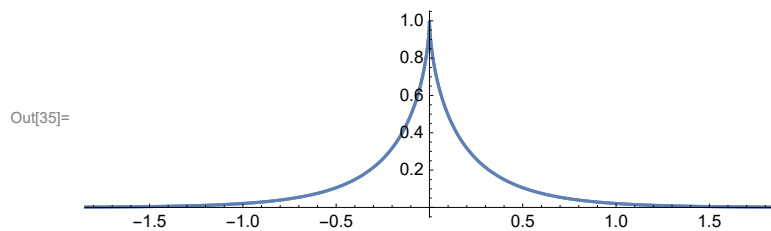
Out[32]= 4



19. Traktrise

In[34]:= **a = 1**
ParametricPlot[{a * (Cos[t] + Log[E, Tan[t/2]]), a * (Sin[t]^3)}, {t, -2 Pi, 2 Pi}]

Out[34]= 1

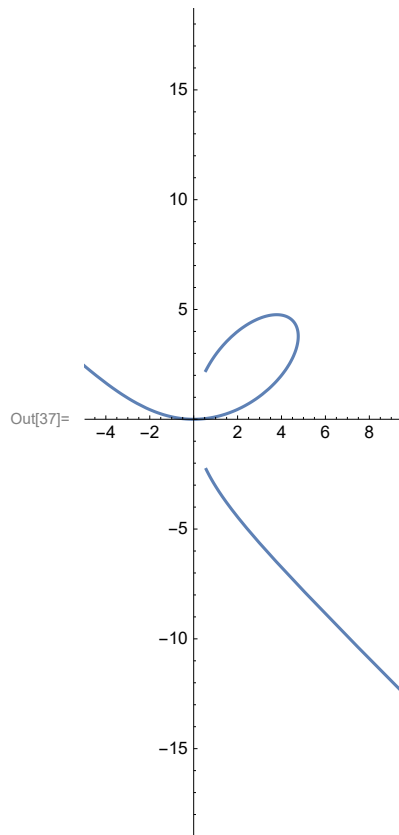


20. Dekarta lapa

In[36]:= **a = 3**

ParametricPlot[$\{\frac{3 * a * t}{1 + t^3}, \frac{3 * a * t^2}{1 + t^3}\}$, {t, -4, 4}]

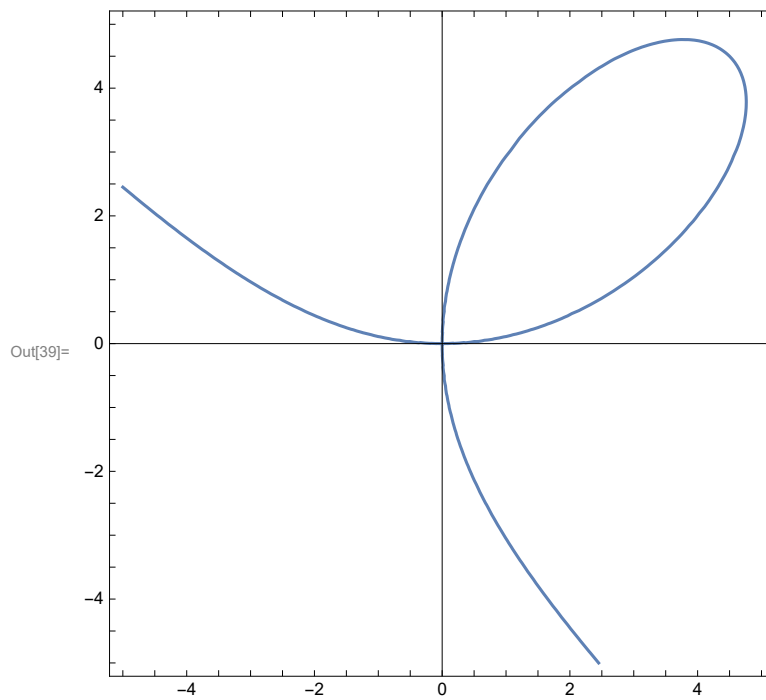
Out[36]= 3



In[38]:= **a = 3**

ContourPlot[$x^3 + y^3 - 3 * a * x * y == 0$, {x, -5, 5}, {y, -5, 5}, Axes -> True]

Out[38]= 3

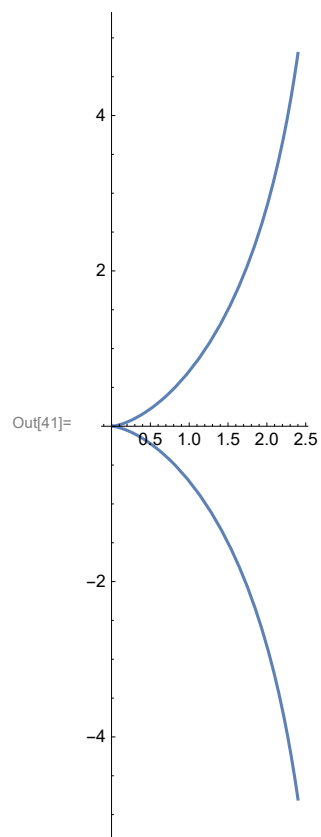


21. Dioklēsa cisoīda

In[40]:= **a = 3**

ParametricPlot[$\{\frac{a * t^2}{1 + t^2}, \frac{a * t^3}{1 + t^2}\}, \{t, -2, 2\}]$

Out[40]= 3

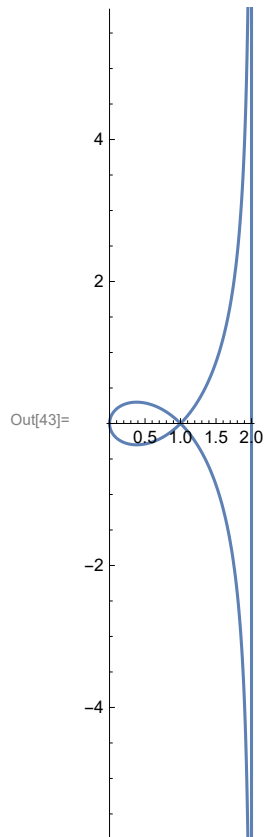


22. Strofoīda

In[42]:= **a = 1**

$$\text{PolarPlot}\left[\frac{a * (1 + \text{Sin}[t])}{\text{Cos}[t]}, \{t, 0, 2 \text{ Pi}\}\right]$$

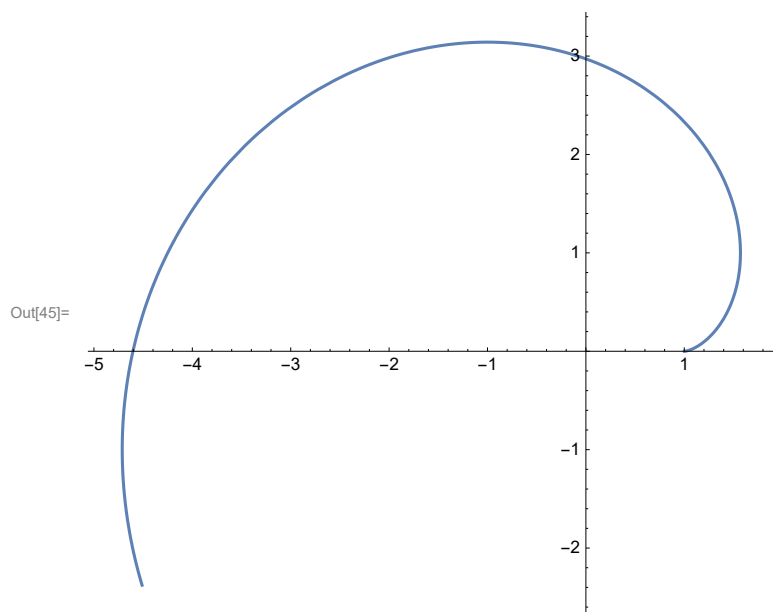
Out[42]= 1



Out[43]=

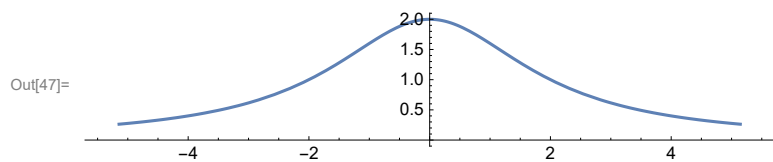
23. Riņķa evolvente

```
In[44]:= a = 1
ParametricPlot[{a * (Cos[t] + t * Sin[t]), a * (Sin[t] - t * Cos[t])}, {t, 0, 5}]
Out[44]= 1
```



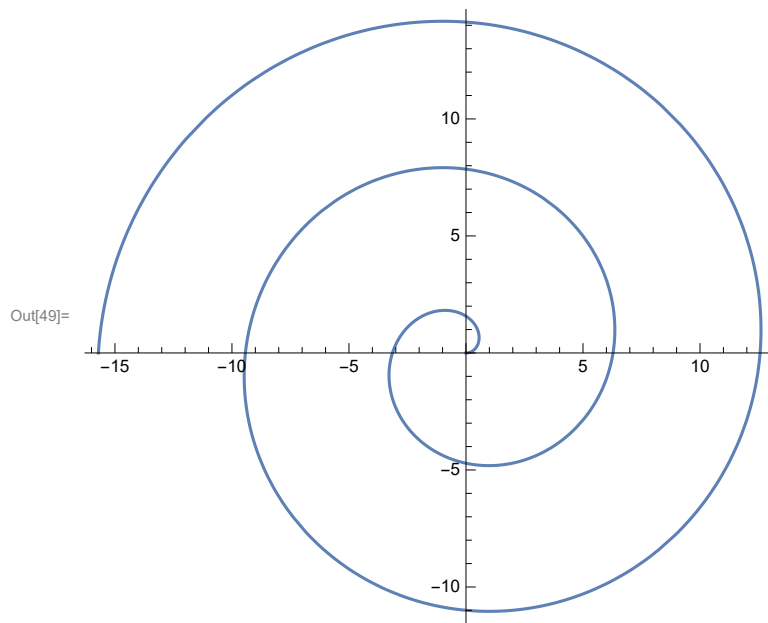
24. Anjēzes līnija

```
In[46]:= a = 1
ParametricPlot[{2 * a * Tan[t], 2 * a * (Cos[t])^2}, {t, -1.2, 1.2}]
Out[46]= 1
```

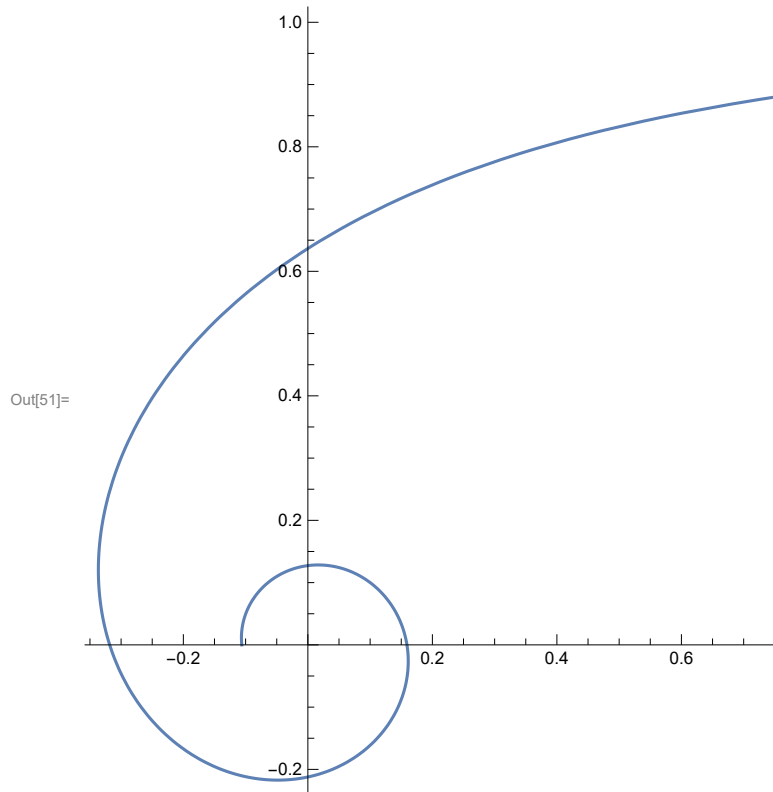


25. Arhimeda spirāle

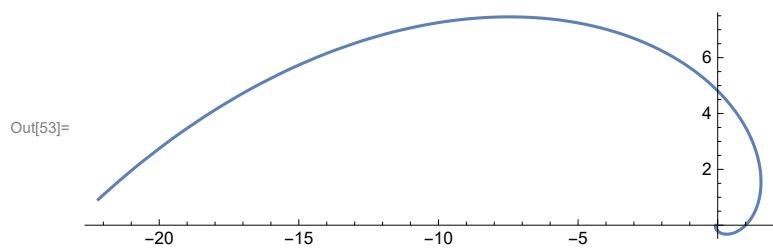

```
In[48]:= a = 1  
PolarPlot[a *  $\phi$ , { $\phi$ , 0, 5 Pi}]  
Out[48]= 1
```



26. Hiperboliskā spirāle

In[50]:= **a = 1****PolarPlot** $\left[\frac{a}{\phi}, \{\phi, 0, 3 \text{ Pi}\}\right]$ Out[50]= **1**

27. Logaritmiskā spirāle

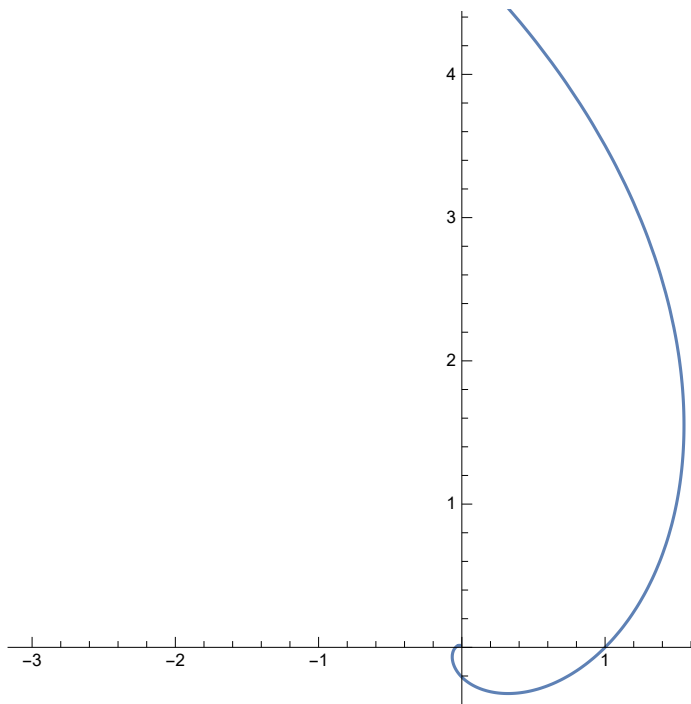
In[52]:= **a = 1****PolarPlot** $\left[e^{a*\phi}, \{\phi, -3.1, 3.1\}\right]$ Out[52]= **1**

vai

```
In[54]:= a = 1
PolarPlot[E^(a * φ), {φ, -4, 2}]
```

```
Out[54]= 1
```

```
Out[55]=
```



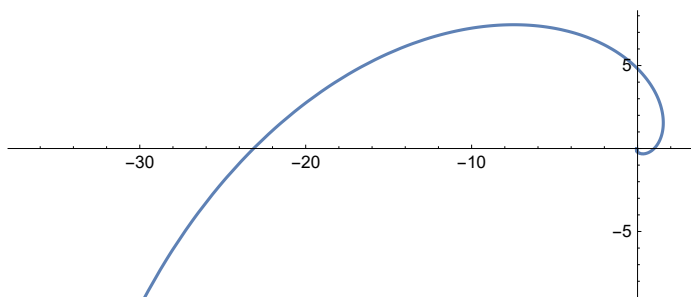
vai

```
In[56]:= a = 1
b = 1
ParametricPlot[{a * E^(b * t) * Cos[t], a * E^(b * t) * Sin[t]}, {t, -3, 4}]
```

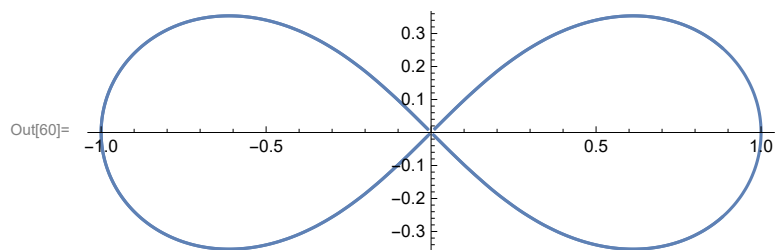
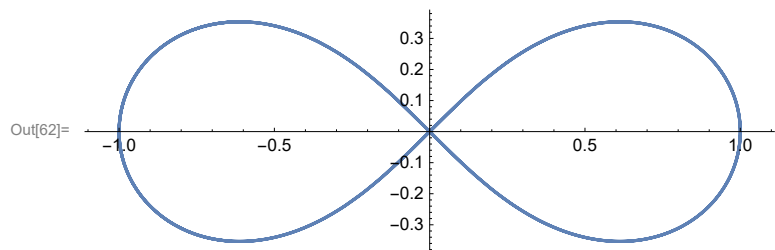
```
Out[56]= 1
```

```
Out[57]= 1
```

```
Out[58]=
```



28. Bernulli lemniskata

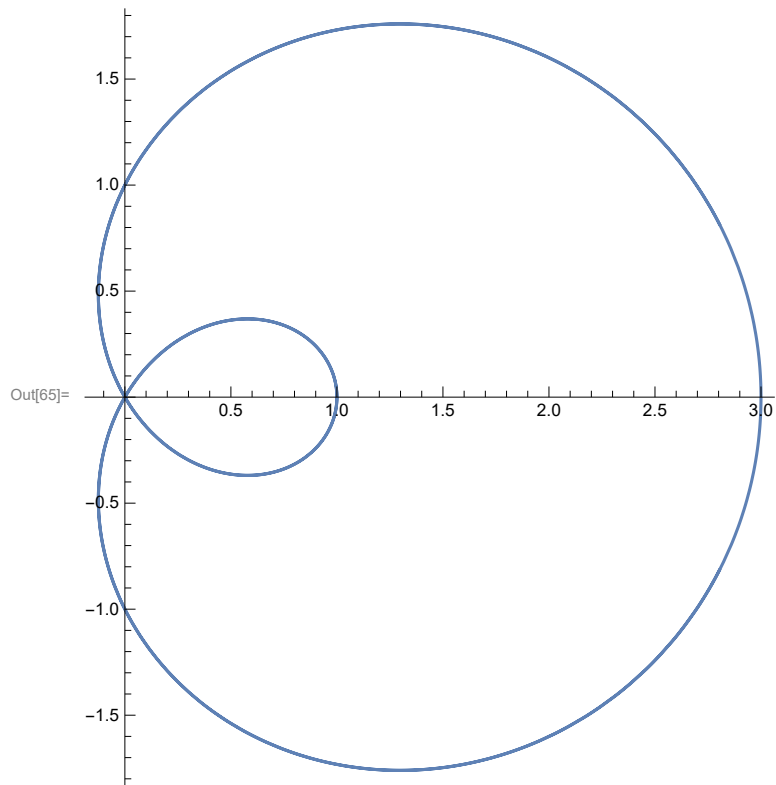
In[59]:= **a = 1****PolarPlot** $\left[\sqrt{a^2 * \text{Cos}[2 \phi]}, \{\phi, -6, 6\}\right]$ Out[59]= **1**In[61]:= **a = 1****ParametricPlot** $\left[\left\{\frac{a * \text{Cos}[t]}{1 + (\text{Sin}[t])^2}, \frac{a * \text{Sin}[t] * \text{Cos}[t]}{1 + (\text{Sin}[t])^2}\right\}, \{t, -10, 10\}\right]$ Out[61]= **1**

29. Paskāla līkne

```
In[63]:= a = 2  
b = 1  
PolarPlot[b + a * Cos[φ], {φ, -6, 6}]
```

Out[63]= 2

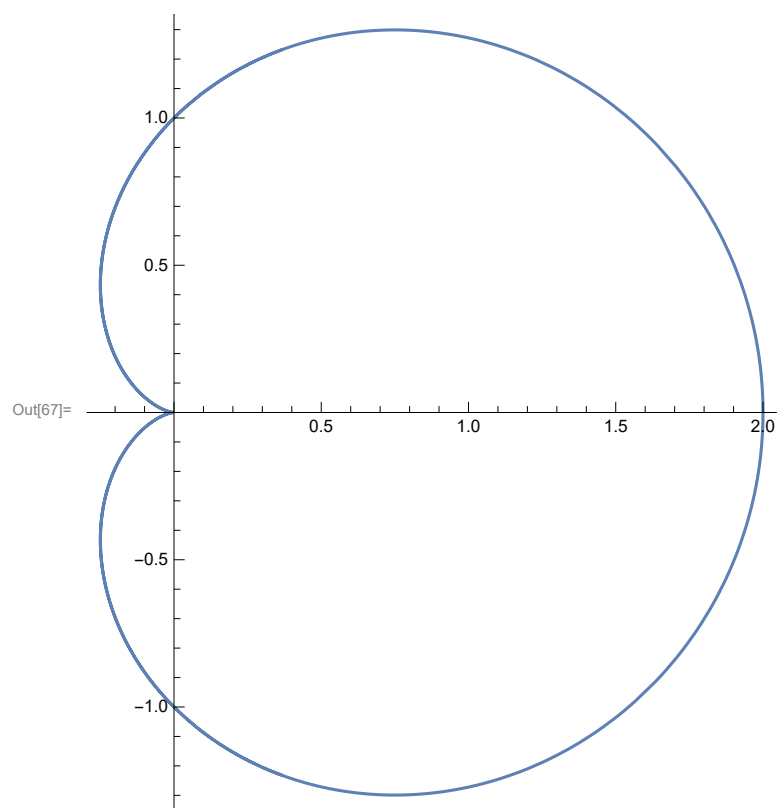
Out[64]= 1



30. Kordioīda

```
In[66]:= a = 1  
PolarPlot[a * (1 + Cos[φ]), {φ, -5, 5}]
```

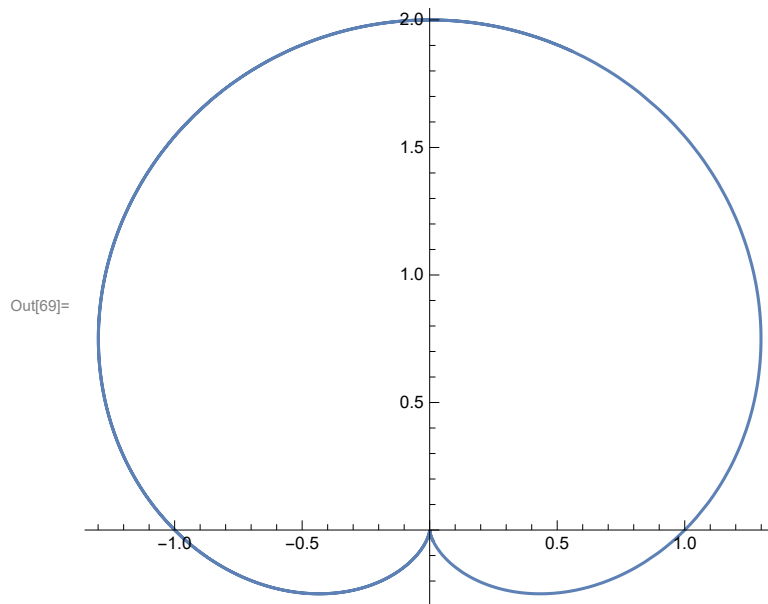
```
Out[66]= 1
```



31. Kardoīda

```
In[68]:= a = 1  
PolarPlot[a * (1 + Sin[φ]), {φ, -5, 5}]
```

```
Out[68]= 1
```

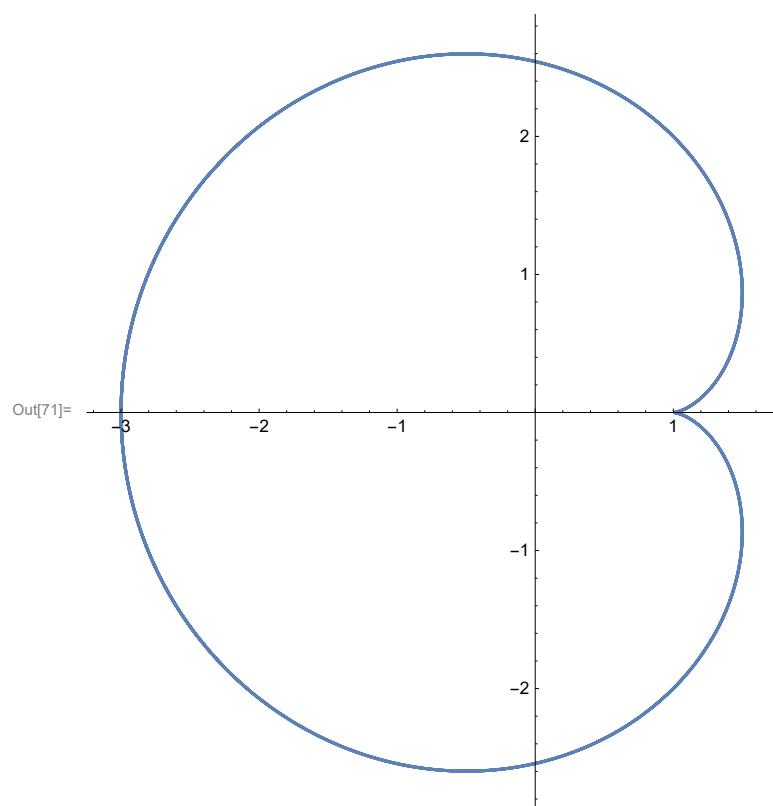


32. Kardioīda

In[70]:= **a = 1**

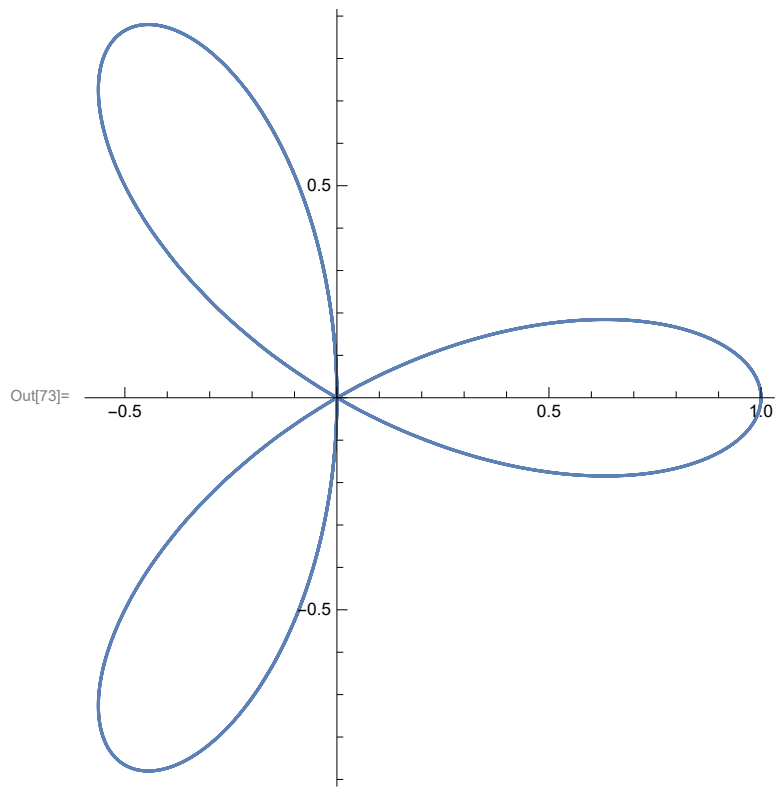
ParametricPlot[{**a * (2 * Cos[t] - Cos[2 t])**, **a * (2 * Sin[t] - Sin[2 t])**}, {**t**, -10, 10}]

Out[70]= **1**



33. Trīsľapu roze

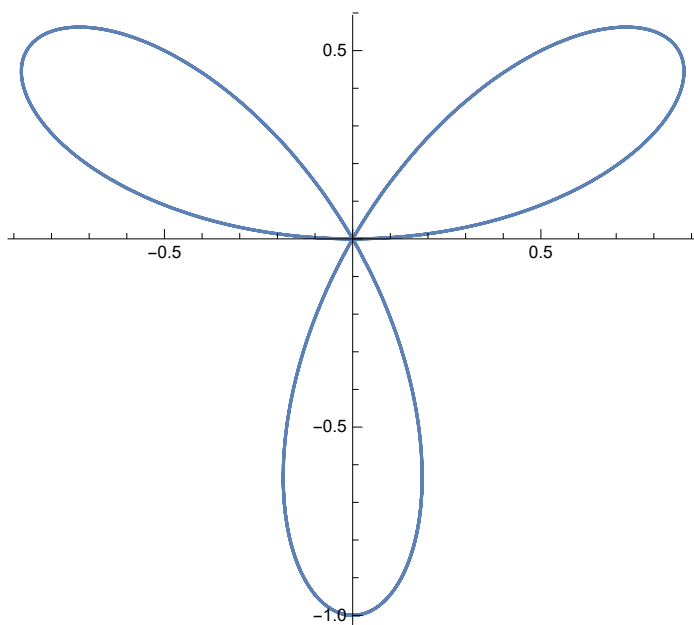

```
In[72]:= a = 1  
PolarPlot[a * Cos[3 *  $\phi$ ], { $\phi$ , -5, 5}]  
Out[72]= 1
```



34. Trīslapu roze

```
In[74]:= a = 1  
PolarPlot[a * Sin[3 *  $\phi$ ], { $\phi$ , -5, 5}]
```

Out[74]= 1

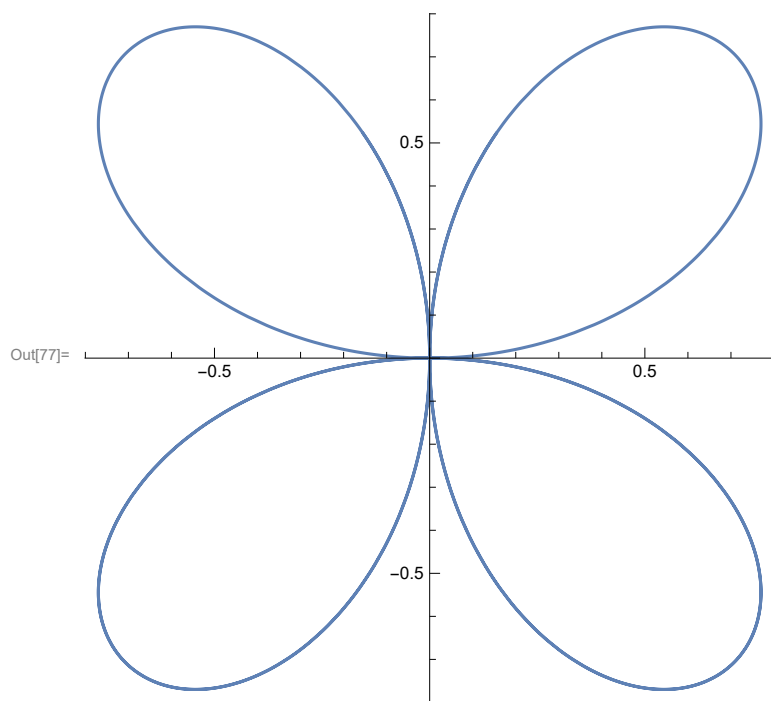


Out[75]=

35. Četrlapu roze

```
In[76]:= a = 1  
PolarPlot[a * Sin[2 *  $\phi$ ], { $\phi$ , -5, 5}]
```

Out[76]= 1

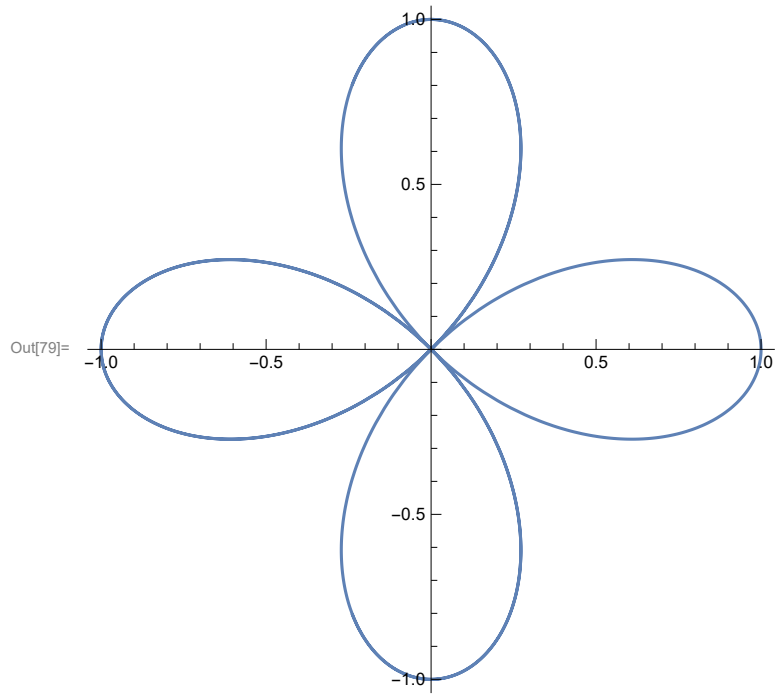


Out[77]=

36. Četrlapu roze

```
In[78]:= a = 1  
PolarPlot[a * Cos[2 * ϕ], {ϕ, -5, 5}]
```

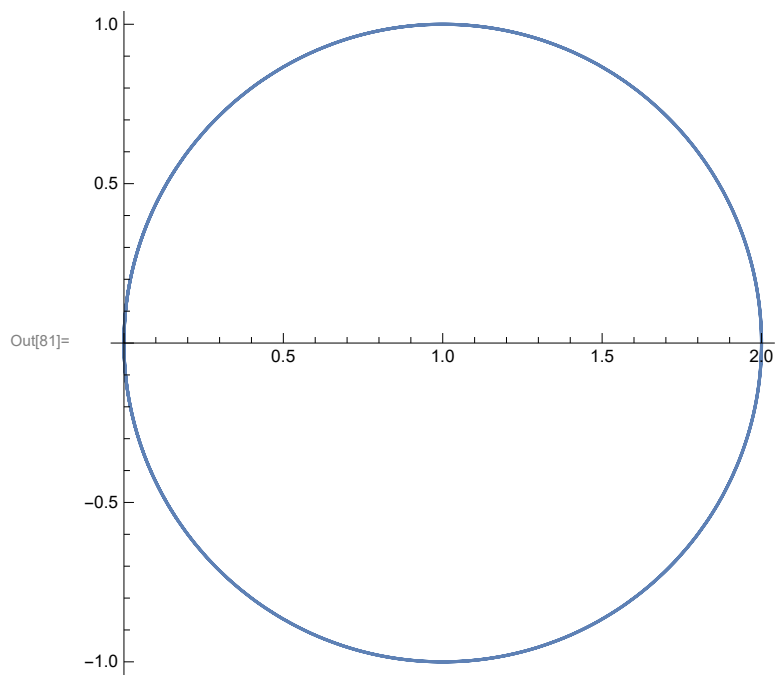
```
Out[78]= 1
```



37. Riņķa līnija

```
In[80]:= a = 1  
PolarPlot[2 * a * Cos[φ], {φ, -5, 5}]
```

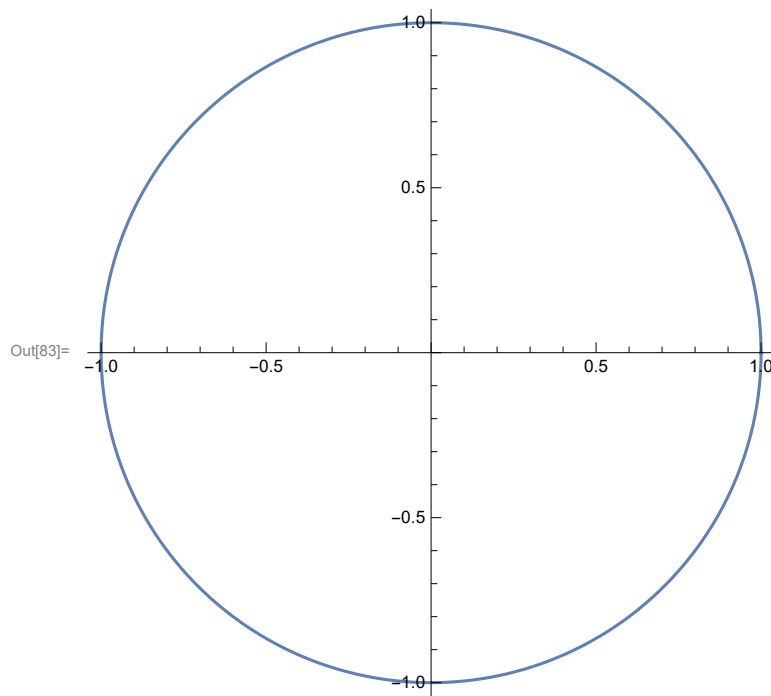
Out[80]= 1



38. Riņķa līnija

```
In[82]:= a = 1  
PolarPlot[a, {φ, 0, 2 Pi}]
```

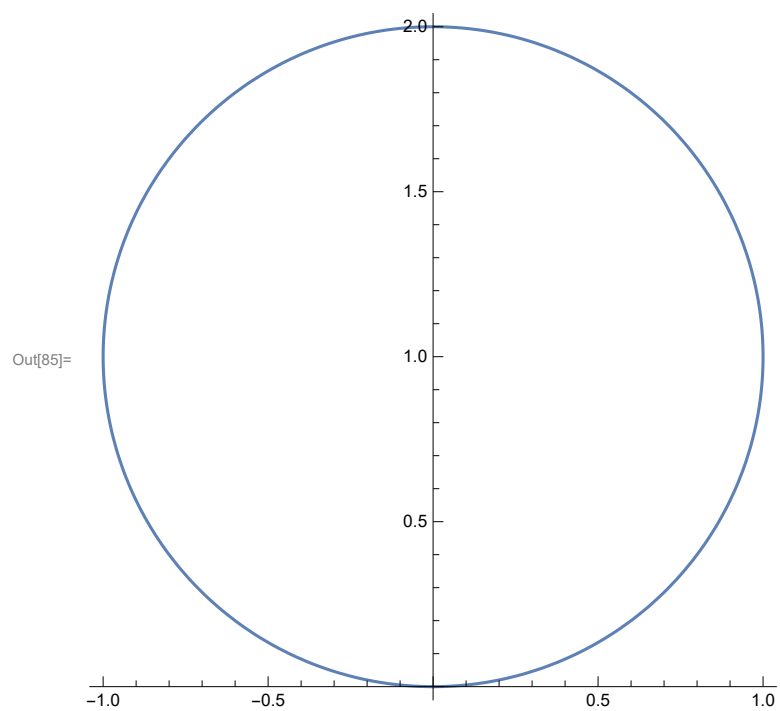
```
Out[82]= 1
```



39. Riņķa līnija

```
In[84]:= a = 1  
PolarPlot[2 * a * Sin[φ], {φ, 0, Pi}]
```

```
Out[84]= 1
```

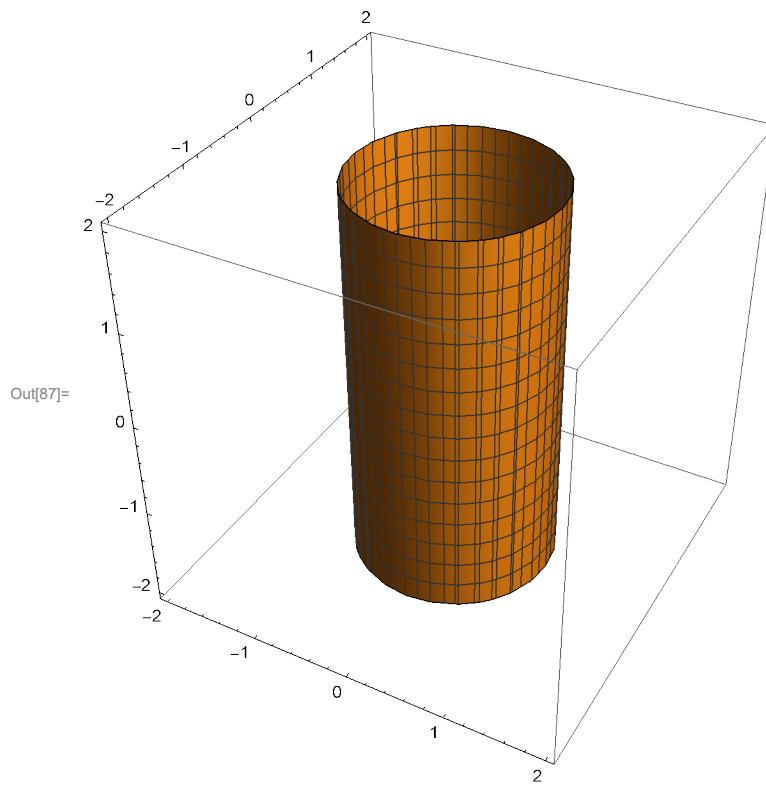


Stereometrija

1. Riņķa cilindrs

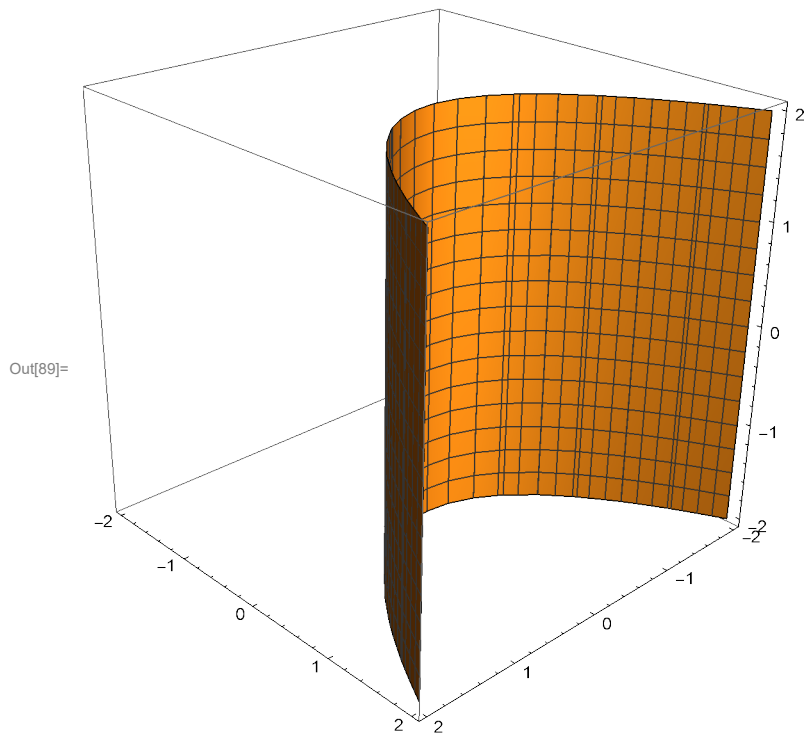
```
In[86]:= r = 1  
ContourPlot3D[x^2 + y^2 == r^2, {x, -2, 2}, {y, -2, 2}, {z, -2, 2}]
```

Out[86]= 1



2. Paraboliskais cilindrs

```
In[88]:= p = 1  
ContourPlot3D[x^2 == 2 * p * y, {x, -2, 2}, {y, -2, 2}, {z, -2, 2}]  
Out[88]= 1
```



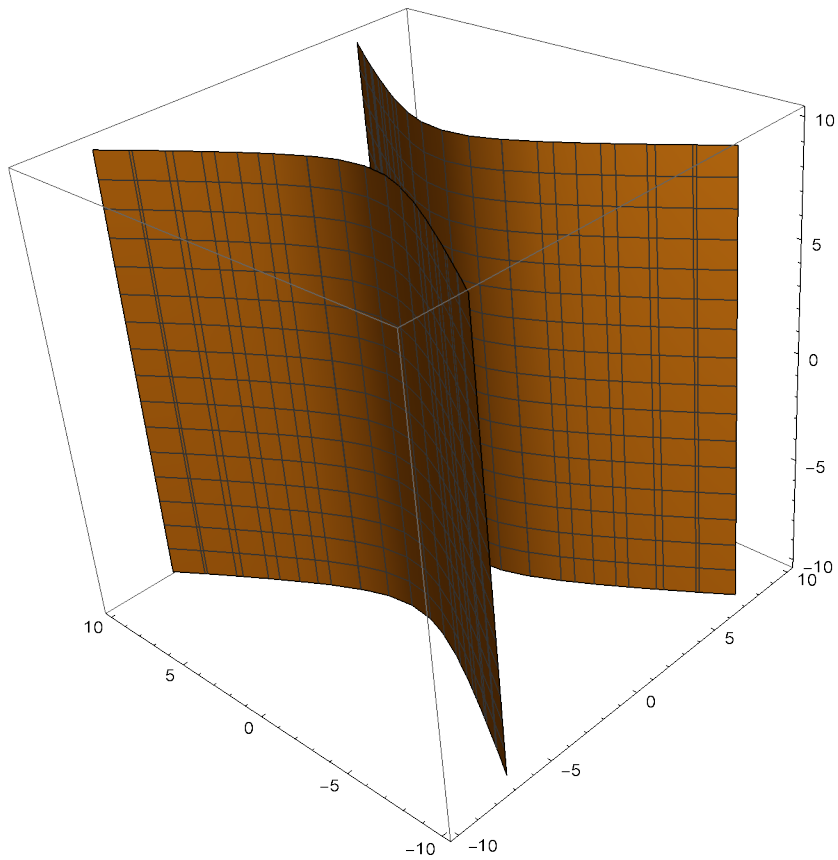
3. Hiperboliskais cilindrs


```
In[90]:= a = 2  
b = 3  
ContourPlot3D[x^2/a^2 - y^2/b^2 == 1, {x, -10, 10}, {y, -10, 10}, {z, -10, 10}]
```

Out[90]= 2

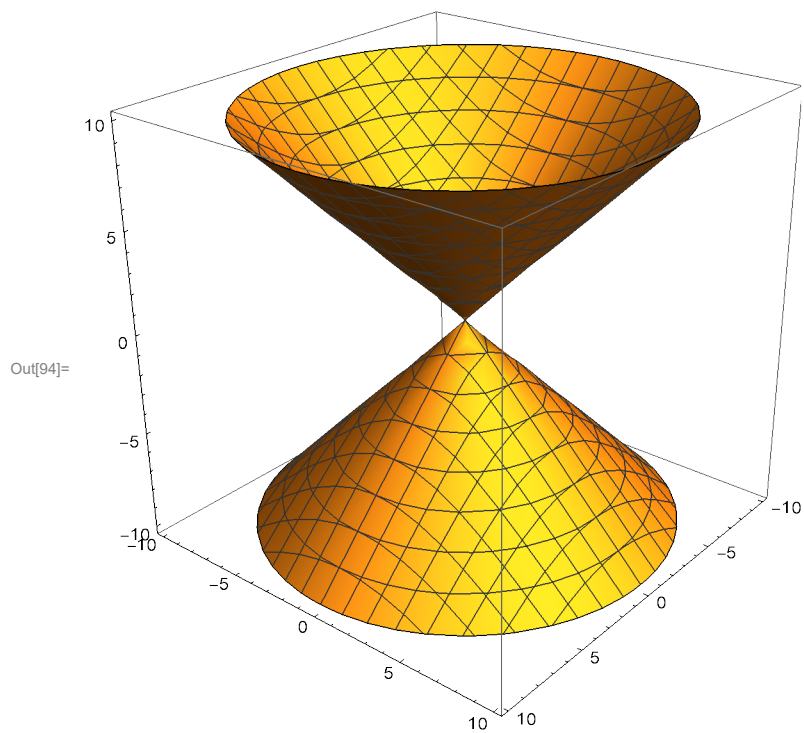
Out[91]= 3

Out[92]=



4. Konuss

```
In[93]:= a = 1  
ContourPlot3D[x^2 + y^2 == a^2 * z^2, {x, -10, 10}, {y, -10, 10}, {z, -10, 10}]  
Out[93]= 1
```



5. Sfēra

```

In[95]:= a = 0
          b = 0
          c = 0
          R = 1
          ContourPlot3D[(x - a)^2 + (y - b)^2 + (z - c)^2 == R^2, {x, -1, 1}, {y, -1, 1}, {z, -1, 1}]

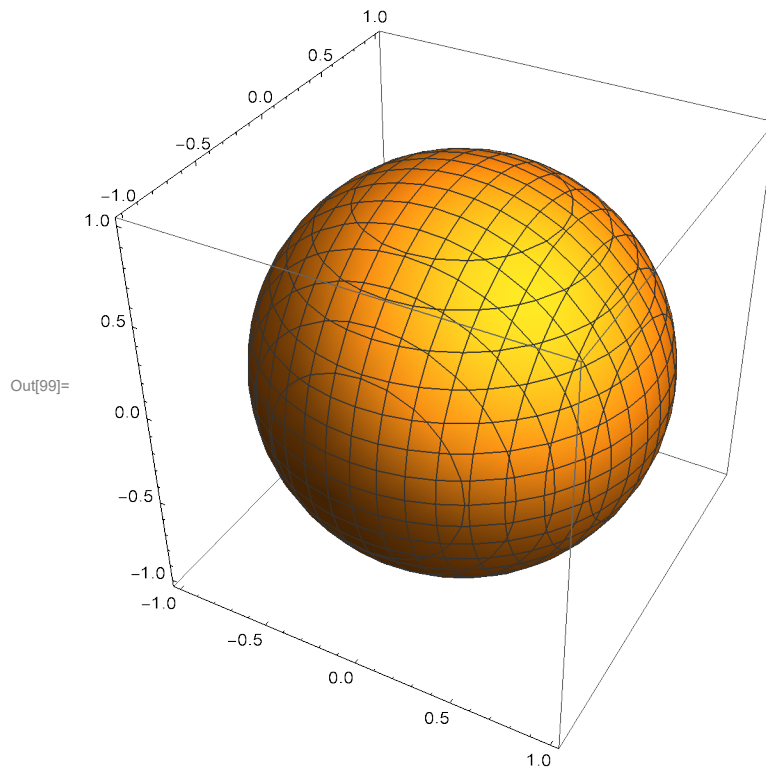
```

Out[95]= 0

Out[96]= 0

Out[97]= 0

Out[98]= 1



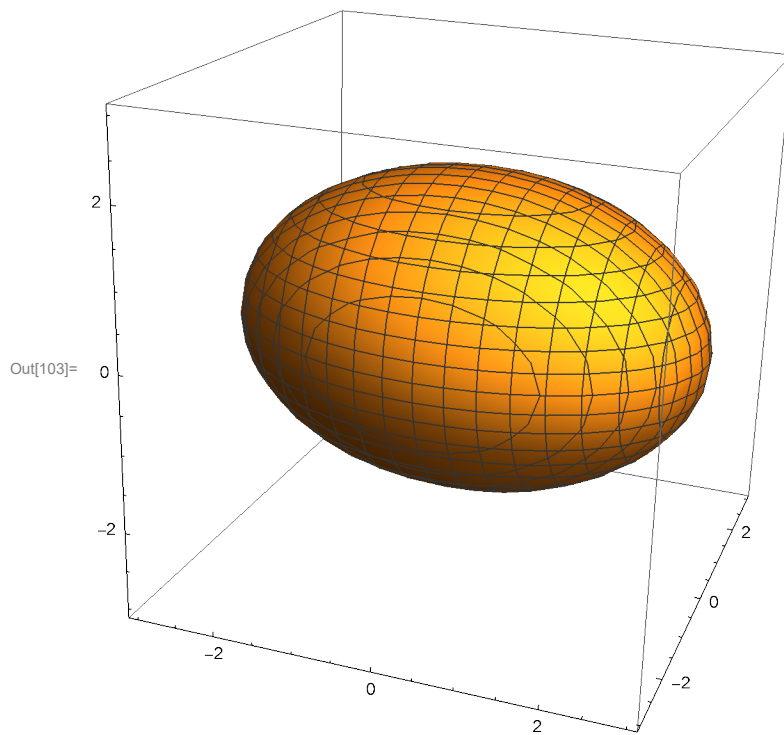
6. Elipsoīds

```
In[100]:= a = 3  
          b = 2  
          c = 2  
          ContourPlot3D[x^2/a^2 + y^2/b^2 + z^2/c^2 == 1, {x, -3, 3}, {y, -3, 3}, {z, -3, 3}]
```

Out[100]= 3

Out[101]= 2

Out[102]= 2



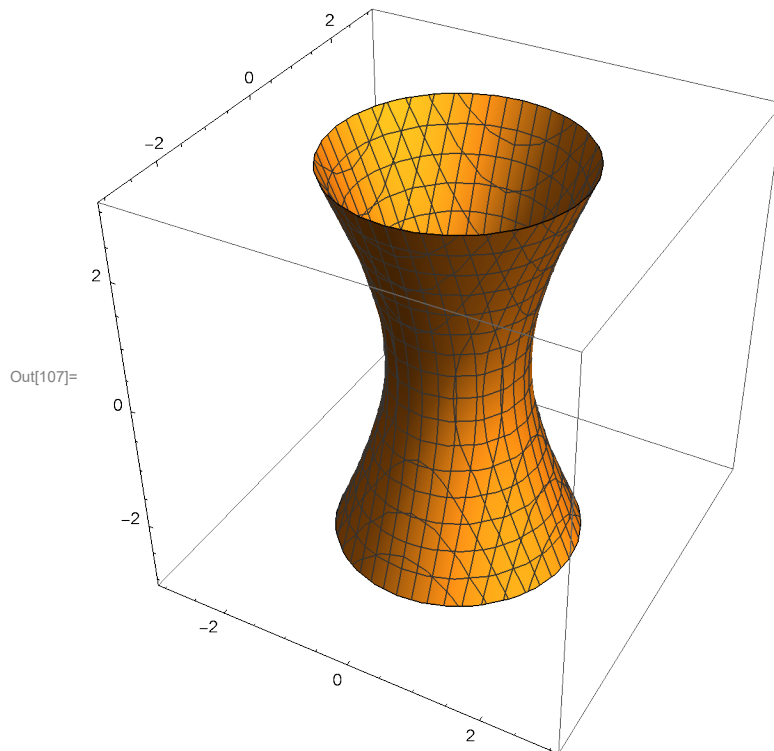
7. Viendobuma hiperboloīds

```
In[104]:= a = 1  
          b = 1  
          c = 2  
          ContourPlot3D[x^2/a^2 + y^2/b^2 - z^2/c^2 == 1, {x, -3, 3}, {y, -3, 3}, {z, -3, 3}]
```

Out[104]= 1

Out[105]= 1

Out[106]= 2



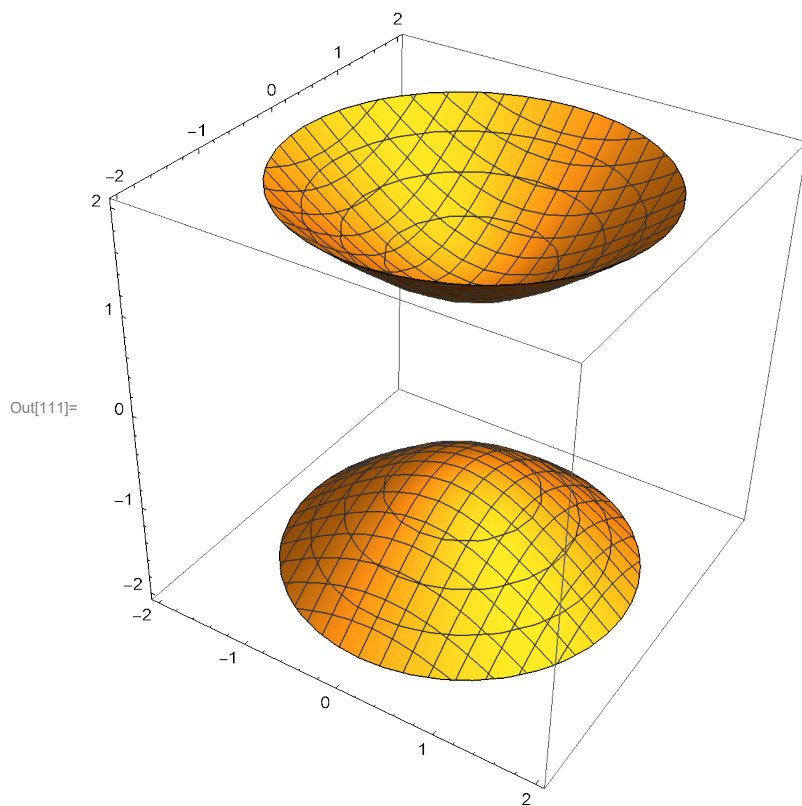
8. Divdobumu hiperboloīds

```
In[108]:= a = 1  
          b = 1  
          c = 1  
          ContourPlot3D[x^2/a^2 + y^2/b^2 - z^2/c^2 == -1, {x, -2, 2}, {y, -2, 2}, {z, -2, 2}]
```

Out[108]= 1

Out[109]= 1

Out[110]= 1



9. Eliptiskais paraboloids

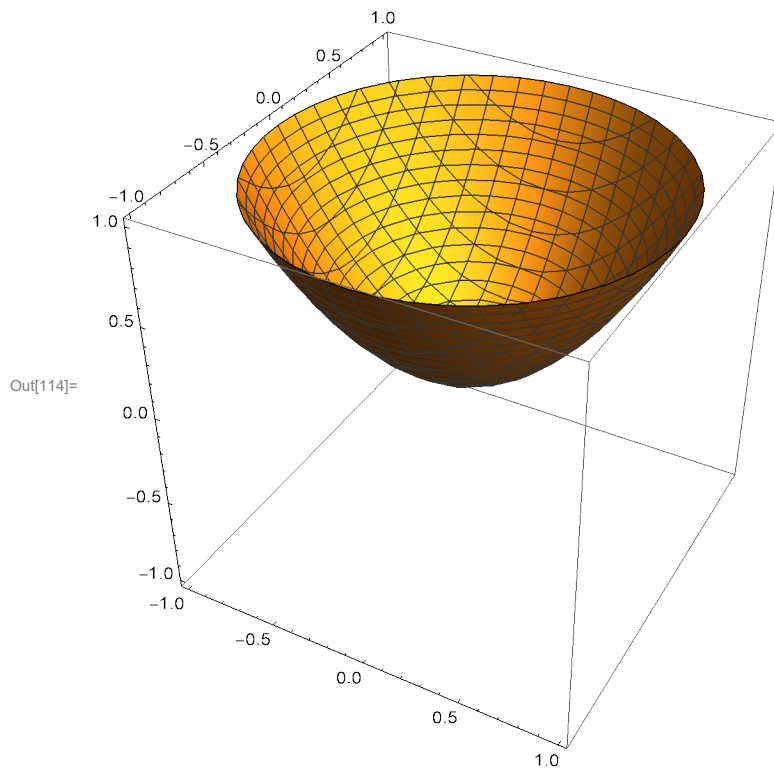
```
In[112]:= a = 1
```

```
b = 1
```

```
ContourPlot3D[ $\frac{x^2}{a^2} + \frac{y^2}{b^2} = z$ , {x, -1, 1}, {y, -1, 1}, {z, -1, 1}]
```

```
Out[112]= 1
```

```
Out[113]= 1
```



10. Hiperboliskais paraboloids (seglu virsma)

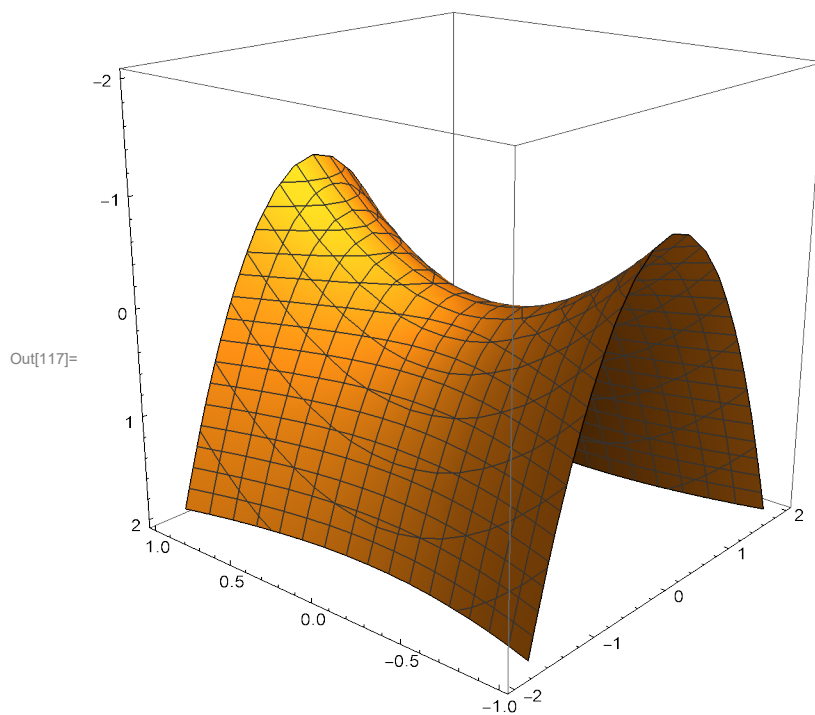
```
In[115]:= a = 1
```

```
b = 1
```

```
ContourPlot3D[ $\frac{x^2}{a^2} - \frac{y^2}{b^2} == -z$ , {x, -1, 1}, {y, -2, 2}, {z, -2, 2}]
```

```
Out[115]= 1
```

```
Out[116]= 1
```

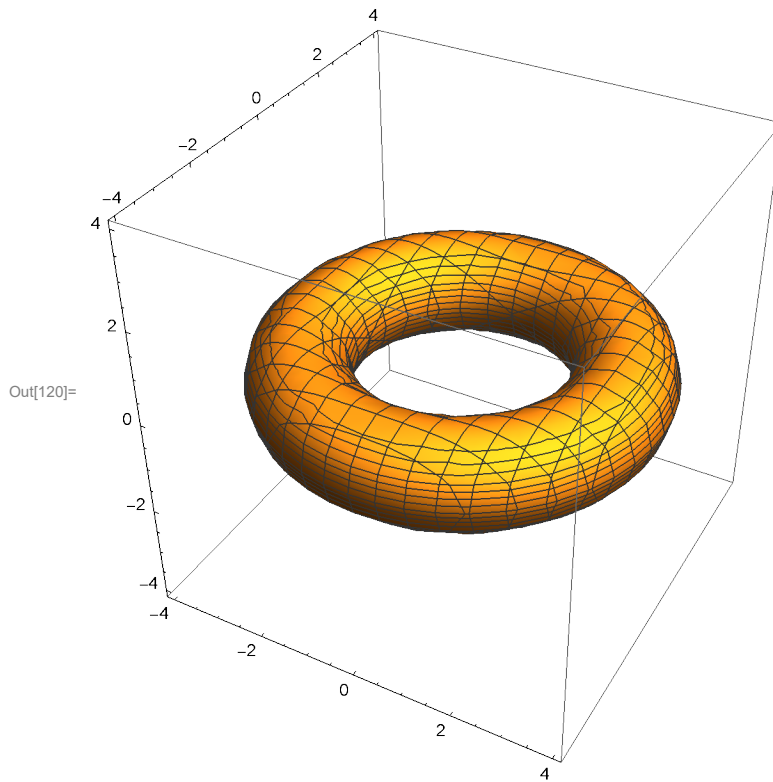


11. Tors


```

In[118]:= a = 3
b = 1
ContourPlot3D[(x2 + y2 + z2 + a2 - b2)2 == 4 * a2 * (x2 + y2), {x, -4, 4}, {y, -4, 4}, {z, -4, 4}]
Out[118]= 3
Out[119]= 1

```



12. Katenoīds

```
In[121]:= a = 1  
b = 1
```

```
ContourPlot3D[(y^2 + z^2) ==  $\frac{a^2}{4} \left( e^{\frac{x}{a}} + e^{-\frac{x}{a}} \right)^2$ , {x, -3, 3}, {y, -3, 3}, {z, -3, 3}]
```

```
Out[121]= 1
```

```
Out[122]= 1
```

