

P.19 重回帰

In [1]:

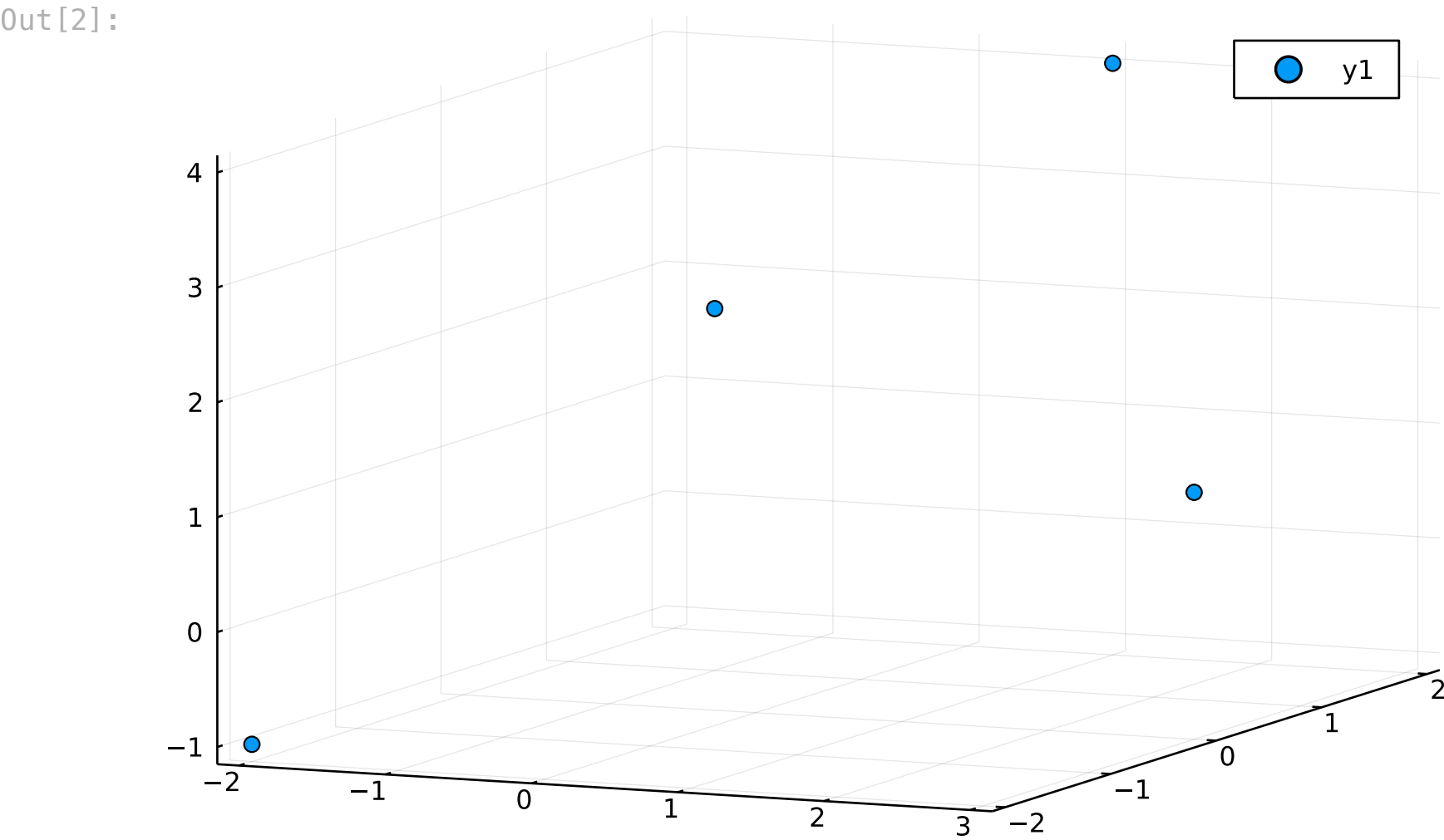
```
using LinearAlgebra
using Plots
```

In [2]:

```
x = [
  1 1 2
  1 -1 1
  1 3 0
  1 -2 -2
]

y = [
  4
  2
  1
  -1
]

scatter(X[:, 2], X[:, 3], y)
```



重回帰モデルの解

In [3]:

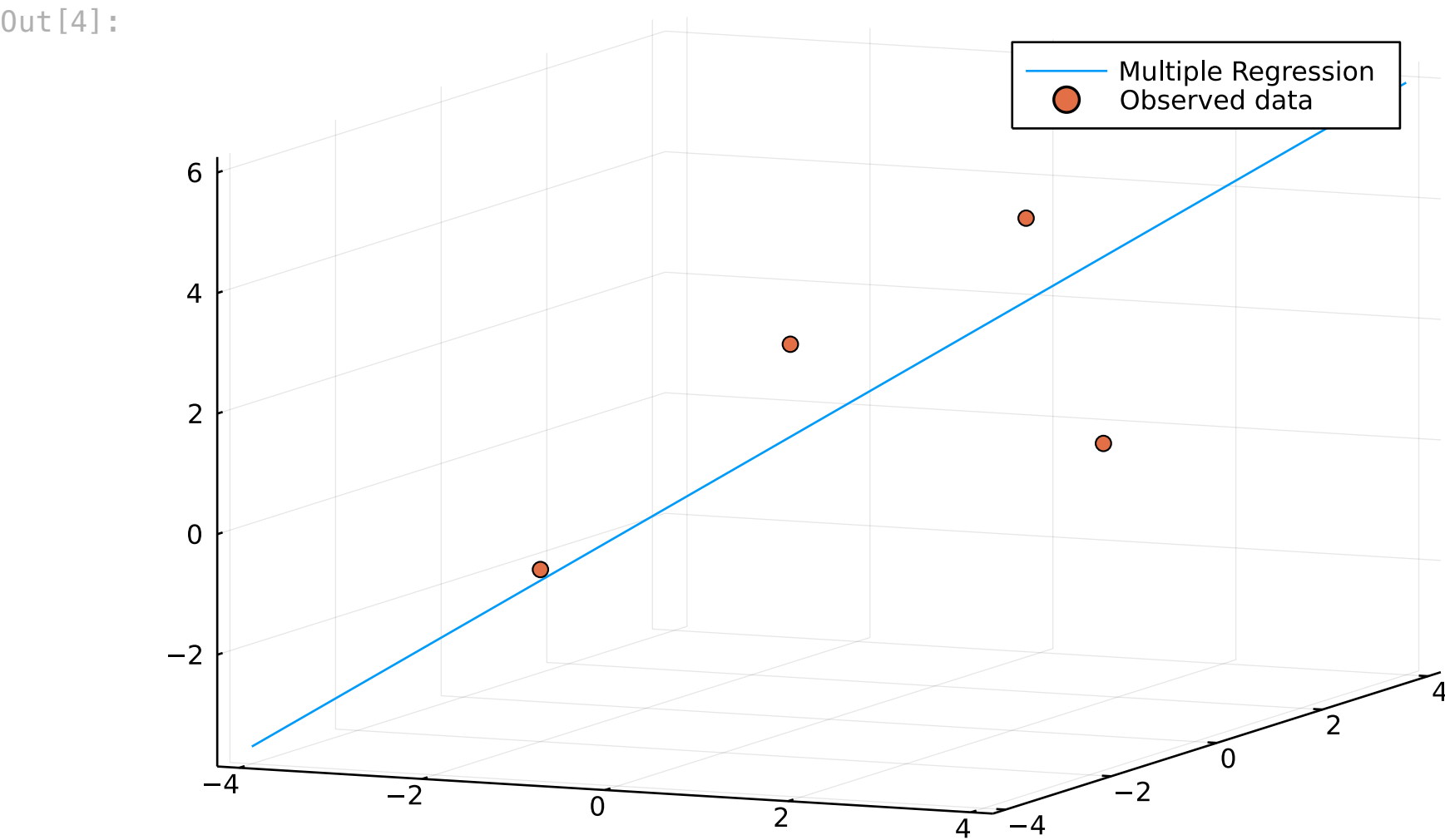
```
w = inv(X' * X) * X' * y
```

Out[3]:

3-element Vector{Float64}:
 1.2018779342723005
 -0.016431924882629123
 1.2089201877934272

In [4]:

```
f(x, y) = w[1] + w[2] * x + w[3] * y
xs = -4:0.5:4
ys = -4:0.5:4
zs = f.(xs, ys)
plot(xs, ys, zs, label="Multiple Regression")
scatter!(X[:, 2], X[:, 3], y, label="Observed data")
```



In []: