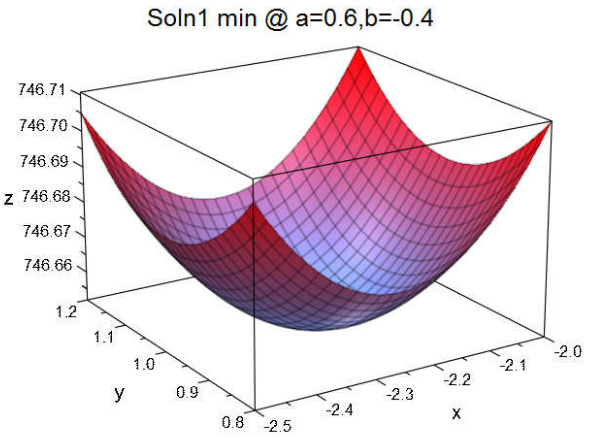



```
subs2:=[a=op(soln2,1)[1],b=op(soln2,1)[2],x=op(soln2,1)[3],y=op(soln2,1)[4]]
```

$$\left[a = \frac{3315\,z + 205\,\sqrt{221}\,z}{442\,z^2},\ b = \frac{2210\,z + 155\,\sqrt{221}\,z}{221\,z^2},\ x = \frac{\sqrt{221}\,z}{11} - \frac{10\,z}{11},\ y = z\right]$$

```
Z2:=Z|subs2
```

$$\left(\frac{\sigma_2}{221\,z} - 20\right)^2 + \left(\frac{\sigma_3}{442\,z} - 15\right)^2 + \left(\frac{\sigma_1\sigma_2}{221\,z^2} + 10\right)^2 + \left(\frac{\sigma_1\sigma_3}{442\,z^2} + 5\right)^2$$

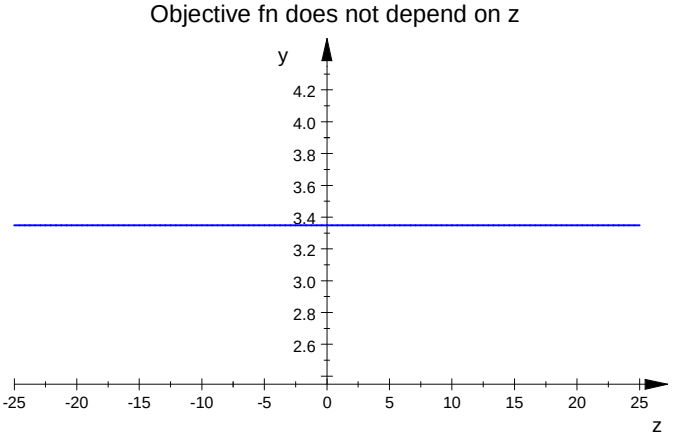
where

$$\sigma_1 = \frac{10\,z}{11} - \frac{\sqrt{221}\,z}{11}$$

$$\sigma_2 = 2210\,z + 155\,\sqrt{221}\,z$$

$$\sigma_3 = 3315\,z + 205\,\sqrt{221}\,z$$

```
plot(Z2,z=-25..25,Header="Objective fn does not depend on z")
```



From above plots we suspect solution 2 is the local minimum.
We also note that the objective function Z is constant wrt z (flat graph) for both solution 1 and solution 2

Here is solution 2 values:

```
float(subs2|z=1)
```

$$[a = 14.39489614,\ b = 20.42642831,\ x = 0.4423698861,\ y = 1.0]$$

```
Warning: 'hull' already has a value, not exported. [use]
Warning: 'Integral' seems to be proteced; not exported. [use]
Warning: 'Pyramid' seems to be proteced; not exported. [use]
```