

https://github.com/t-o-k/Maxima-bezier/bezier_curve_3d.wmx

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```
(%i1) load("draw")$
```

```
(%i2) load("bezier")$
```

```
(%i3) weights_x_1a: matrix([ +0, +2, +6, +5 ])$
```

```
(%i4) weights_y_1a: matrix([ +2, -1, +6, +0 ])$
```

```
(%i5) weights_z_1a: matrix([ +1, -3, +2, +0 ])$
```

```
(%i6) define(
      curve_x(s),
      bezier_function_1a(weights_x_1a, s)
    )$
```

```
(%i7) expand(curve_x(s));
```

```
(%o7)  $-7 s^3 + 6 s^2 + 6 s$ 
```

```
(%i8) define(
      curve_y(s),
      bezier_function_1a(weights_y_1a, s)
    )$
```

```
(%i9) expand(curve_y(s));
```

```
(%o9)  $-23 s^3 + 30 s^2 - 9 s + 2$ 
```

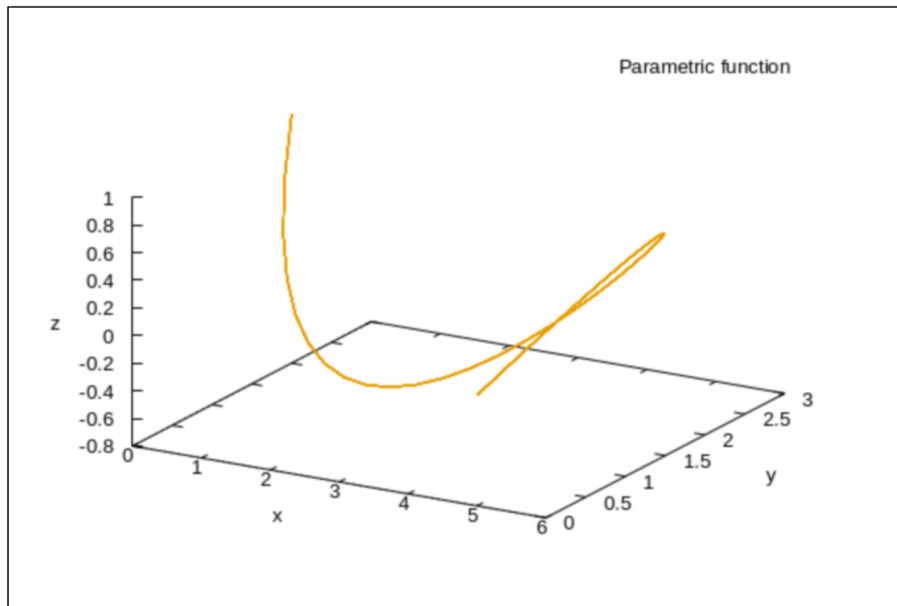
```
(%i10) define(
      curve_z(s),
      bezier_function_1a(weights_z_1a, s)
    )$
```

```
(%i11) expand(curve_z(s));
```

```
(%o11)  $-16 s^3 + 27 s^2 - 12 s + 1$ 
```

```
(%i12) wxplot3d(  
  [  
    curve_x(s),  
    curve_y(s),  
    curve_z(s)  
  ],  
  [ s, 0, 1 ],  
  [ t, 0, 1 ]  
);
```

(%t12)



(%o12)