

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

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```
(%i1) kill(all)$

(%i1) load("draw")$

(%i2) load("bezier")$

(%i3) points_x: matrix([ 0, 2, 6, 5 ])$

(%i4) points_y: matrix([ 2, -1, 6, 0 ])$

(%i5) points_z: matrix([ 1, -3, 2, 0 ])$

(%i6) define(curve_x(s), bezier_function_1a(points_x, s))$

(%i7) define(curve_y(s), bezier_function_1a(points_y, s))$

(%i8) define(curve_z(s), bezier_function_1a(points_z, s))$

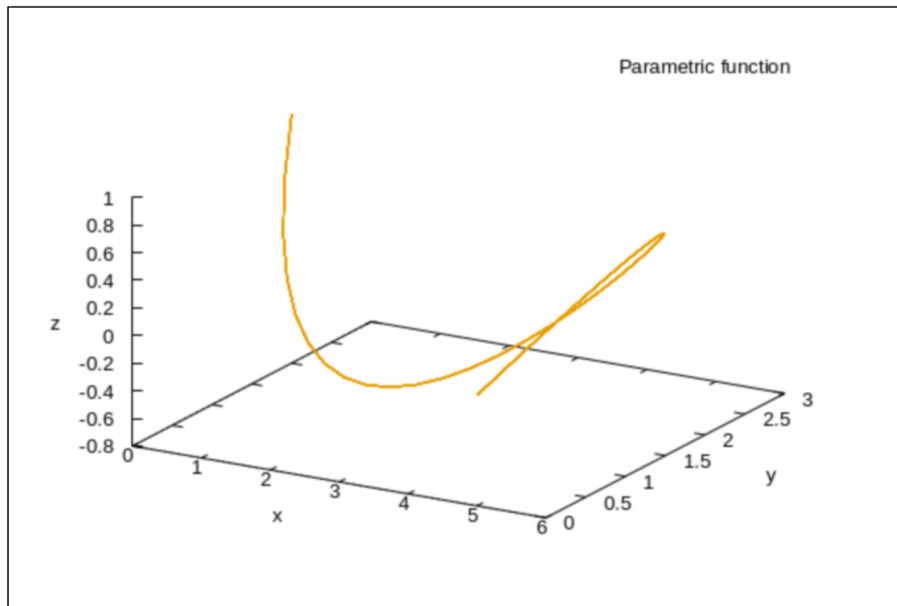
(%i9) expand(curve_x(s));
(%o9)  $-7s^3 + 6s^2 + 6s$ 

(%i10) expand(curve_y(s));
(%o10)  $-23s^3 + 30s^2 - 9s + 2$ 

(%i11) expand(curve_z(s));
(%o11)  $-16s^3 + 27s^2 - 12s + 1$ 
```

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

(%t12)



(%o12)