In[344]:=

```
R = {1 - 3 x^2 + 2 x^3, x - 2 x^2 + x^3, 3 x^2 - 2 x^3, -x^2 + x^3}
```

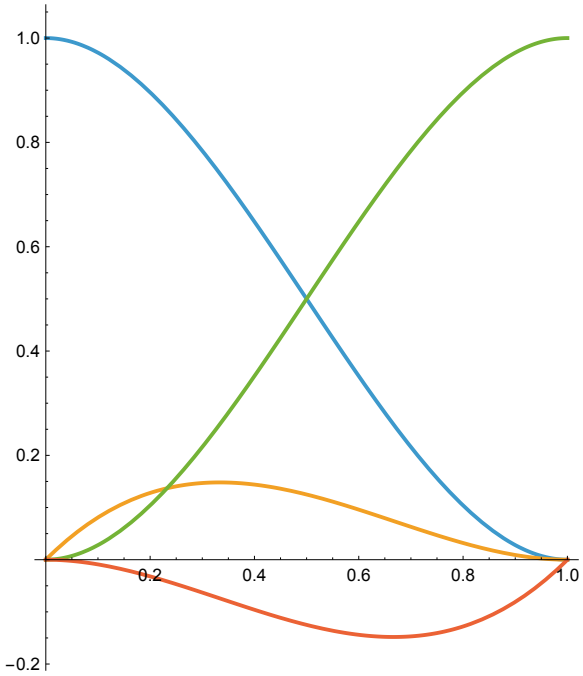
Out[344]=

$$\left\{1 - 3\,x^2 + 2\,x^3,\ x - 2\,x^2 + x^3,\ 3\,x^2 - 2\,x^3,\ -x^2 + x^3\right\}$$

In[345]:=

```
Plot[R, {x, 0, 1}, AspectRatio → Automatic]
```

Out[345]=



In[346]:=
```
c = {Cos[5 x], Sin[7 x]}
dc = D[c, x]
x1 = N[1 / 2000, 50]
HermData = {c /. {x → 0}, x1 * ( dc /. {x → 0}), c /. {x → x1}, x1 * (dc /. {x → x1})}
g = R.HermData
```

Out[346]=
$$\{\text{Cos}[5\,x],\ \text{Sin}[7\,x]\}$$

Out[347]=
$$\{-5\,\text{Sin}[5\,x],\ 7\,\text{Cos}[7\,x]\}$$

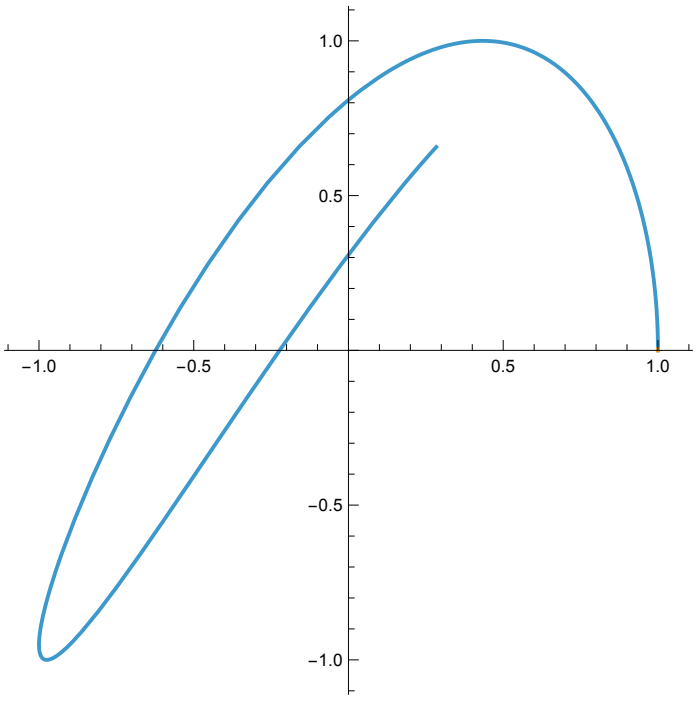
Out[348]=
$$0.00050000000000000000000000000000000000000000000000000000$$

Out[349]=
$$\{\{1,\ 0\},\ \{0,\ 0.00350000000000000000000000000000000000000000000000000000\},$$
$$\{0.99999687500162760382758250312199405471706555555069722687,$$
$$0.00349999285417104348830676019983363617360991074864 62\},$$
$$\{-6.24999348958536783823891294170729338128889621953 4\times 10^{-6},$$
$$0.00349997856252188410564732183322489940951991569361 59\}\}$$

Out[350]=
$$\{1 - 3\,x^2 + 2\,x^3 +$$
$$0.99999687500162760382758250312199405471706555555069722687\,\left(3\,x^2 - 2\,x^3\right) -$$
$$6.24999348958536783823891294170729338128889621953 4\times 10^{-6}\,\left(-x^2 + x^3\right),$$
$$0.00349999285417104348830676019983363617360991074864 62\,\left(3\,x^2 - 2\,x^3\right) +$$
$$0.00350000000000000000000000000000000000000000000000000000\,\left(x - 2\,x^2 + x^3\right) +$$
$$0.00349997856252188410564732183322489940951991569361 59\,\left(-x^2 + x^3\right)\}$$

In[351]:=
```
ParametricPlot[{c, g}, {x, 0, 1}, AspectRatio → Automatic]
```

Out[351]=



In[352]:=
```
n = 100
xs = N[Table[i / n, {i, 0, n}], 50];
sBody = Table[c /. {x → x1 * xs[[i]]}, {i, 1, Length[xs]}];
gBody = Table[g /. {x → xs[[i]]}, {i, 1, Length[xs]}];
```

Out[352]=
```
100
```

In[356]:=
```
h2 = Hasdorf = Max[
   Max[Table[Min[Table[Norm[sBody[[i]] - gBody[[j]], {j, 1, n + 1}]], {i, 1, n + 1}]],
   Max[Table[Min[Table[Norm[sBody[[j]] - gBody[[i]], {j, 1, n + 1}]], {i, 1, n + 1}]]]
```

Out[356]=
$$1.017274691096825866580271860885664238 \times 10^{-13}$$

In[357]:=

In[358]:=
```
h1 = 1.627745517796905694489148930*^-12
```

Out[358]=
$$1.62774551779690569448914893 \times 10^{-12}$$

In[359]:=
```
h1 / h2
```

Out[359]=
```
16.001042118150703284934195 47
```