In[2]:=

```
r = {1 + 2 Sin[t], 2 Cos[t], 4 Cos[t] + 4 Sin[2 t]}
```

Out[2]= $\{1 + 2\,\text{Sin}[t],\ 2\,\text{Cos}[t],\ 4\,\text{Cos}[t] + 4\,\text{Sin}[2\,t]\}$

In[3]:=

```
r1 = D[r, t] /. t → π / 2
```

Out[3]= {0, -2, -12}

In[4]:=

```
r2 = D[D[r, t], t] /. t → π / 2
```

Out[4]= {-2, 0, 0}

In[5]:=

```
T = r1 / Norm[r1]
```

Out[5]= $\left\{0, -\frac{1}{\sqrt{37}}, -\frac{6}{\sqrt{37}}\right\}$

In[6]:=

```
B = Cross[r1, r2] / Norm[Cross[r1, r2]]
```

Out[6]= $\left\{0, \frac{6}{\sqrt{37}}, -\frac{1}{\sqrt{37}}\right\}$

In[7]:=

```
Nvec = Cross[B, T]
```

Out[7]= {-1, 0, 0}

In[8]:=

```
FrenetSerretSystem[{1 + 2 Sin[t], 2 Cos[t], 4 Cos[t] + 4 Sin[2 t]}, t] /. t → π / 2
```

Out[8]= $\left\{\left\{\frac{1}{74}, -\frac{6}{37}\right\}, \left\{\left\{0, -\frac{1}{\sqrt{37}}, -\frac{6}{\sqrt{37}}\right\}, \{-1, 0, 0\}, \left\{0, \frac{6}{\sqrt{37}}, -\frac{1}{\sqrt{37}}\right\}\right\}\right\}$