

Pensieve header: Testing R and η .

```
SetDirectory["C:\\drorbn\\AcademicPensieve\\2012-04"];
```

```
<< betaCalculus.m
```

```
R[1, 2] // d $\eta$ [1]
```

(1)

```
R[1, 2] // d $\eta$ [2]
```

(1)

```
R[1, 2]
```

$$\begin{pmatrix} 1 & h[2] \\ t[1] & \frac{-1+e^{c_1}}{c_1} \end{pmatrix}$$

```
r[x_, y_] := B[1, t[x] h[y]]
```

```
r[1, 2]
```

$$\begin{pmatrix} 1 & h[2] \\ t[1] & 1 \end{pmatrix}$$

```
{r[1, 2] ** r[1, 3] ** r[2, 3], r[2, 3] ** r[1, 3] ** r[1, 2]}
```

$$\left\{ \begin{pmatrix} 1 & h[2] & h[3] \\ t[1] & 1 & 1 \\ t[2] & 0 & 1+c_1 \end{pmatrix}, \begin{pmatrix} 1 & h[2] & h[3] \\ t[1] & 1 & 1 \\ t[2] & 0 & 1+c_1 \end{pmatrix} \right\}$$

```
r[1, 2] // dS[1]
```

$$\begin{pmatrix} 1 & h[2] \\ t[1] & -1 \end{pmatrix}$$

```
(r[1, 2] // dS[1]) ** r[1, 2]
```

$$\begin{pmatrix} 1 & h[2] \\ t[1] & -c_1 \end{pmatrix}$$

```
(R[1, 2] // dS[1]) ** R[1, 2]
```

(1)