

test-ge-latex

March 3, 2025

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[1]: (load "load-weyl")
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[3]: (in-package :weyl)
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```
#<PACKAGE "WEYL">
```

```
[4]: (ge-vars '(p q r x_0 x_1 x_2 x_3))
```

NIL

```
[5]: (list-ge-vars)
```

```
(x_3 x_2 x_1 x_0 r q p v.1 x)
```

```
[7]: (defun test-latex ()
      (list (latex (+ p q))
            (latex (* p q))
            (latex (* p (expt q 2) ))
            (latex (* p (expt q 2) (sin x_1)))
            (latex (/ p q))
            (latex (+ (* x_3 (expt x_1 x_2)) (* x_0 x_1 x_2 (expt x_3 p))))
            (latex (* p (expt q 2) (sin x_1)))
            (latex (/ x_1 x_0))
            (latex (+ (* x_3 (expt x_1 x_2)) (* x_0 x_1 x_2 (expt x_3 p))))
      ))
```

TEST-LATEX

```
[16]: (test-latex)
```

[illegible]

```
[17]: (latex (+ p q))
```

$$q + p$$

```
[18]: (latex (* p q))
```

$$qp$$

```
[19]: (latex (* p (expt q 2) ))
```

$$q^2 p$$

```
[20]: (latex (* p (expt q 2) (sin x_1)))
```

$$q^2 p \sin(x_1)$$

```
[21]: (latex (/ p q))
```

$$q^{-1} p$$

```
[22]: (latex (+ (* x_3 (expt x_1 x_2)) (* x_0 x_1 x_2 (expt x_3 p))))
```

$$x_3 x_1^{x_2} + x_3^p x_2 x_1 x_0$$

```
[23]: (latex (* p (expt q 2) (sin x_1)))
```

$$q^2 p \sin(x_1)$$

```
[24]: (latex (/ x_1 x_0))
```

$$x_1 x_0^{-1}$$

```
[25]: (latex (+ (* x_3 (expt x_1 x_2)) (* x_0 x_1 x_2 (expt x_3 p))))
```

$$x_3 x_1^{x_2} + x_3^p x_2 x_1 x_0$$

Bad! need ()

```
[28]: (latex (+-> "p*q^(x_0+2*x_1)^3"))
```

$$q^{2x_1+x_0^3} p$$

```
[29]: (+-> "p*q^(x_0+2*x_1)^3")
```

```
q^(2 x_1 + x_0)^3 p
```

```
[31]: (latex (deriv (+-> "p*q^(x_0+2*x_1)^3") p q))
```

$$2x_1 + x_0^3 q^{-1+2x_1+x_0^3}$$

```
[32]: (latex (deriv (+-> "p*q^(x_0+2*x_1)^3") p q x_1))
```

$$62x_1 + x_0^2 q^{-1+2x_1+x_0^3} + 6\log(q) q^{-1+2x_1+x_0^3} 2x_1 + x_0^5$$

```
[ ]: ;;;
```