

Using SageTeX, one can use Sage to compute things and put them into your L<sup>A</sup>T<sub>E</sub>X document. For example, there are 543075296126019045035073055561928520 integer partitions of 1269. You don't need to compute the number yourself, or even cut and paste it from somewhere.

Here's some Sage code:

```
f(x) = exp(x) * sin(2*x)
```

The second derivative of  $f$  is

$$\frac{d^2}{dx^2} e^x \sin(2x) = 4 \cos(2x) e^x - 3 e^x \sin(2x).$$

Here's a plot of  $f$  from  $-1$  to  $1$ :

