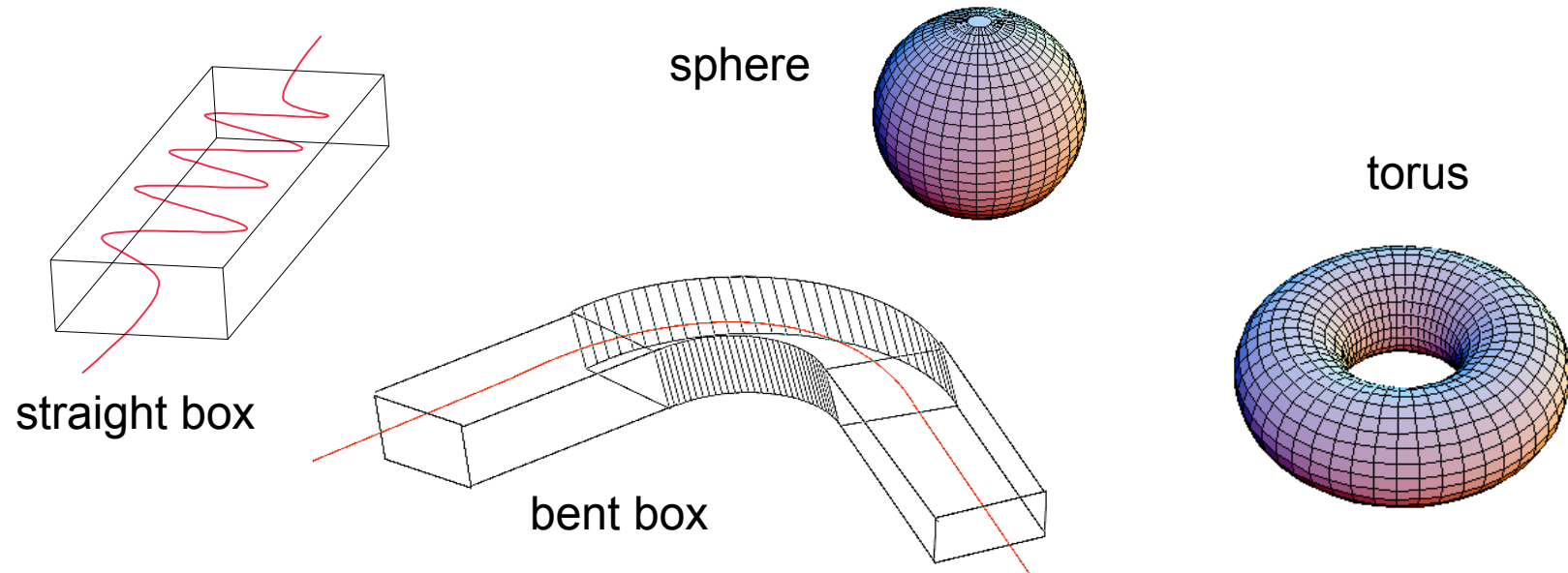


Benchmarks for various domains



The procedure has been benchmarked for the above domains using arrays of magnetic monopoles to produce test fields. Power series for the components of \mathbf{B} at a given point \mathbf{r}_d are computed from the power series for \mathbf{A} . These results can be compared to the known Taylor coefficients of the field. We find, using a surface fit that is accurate to 10^{-4} , that all computed coefficients are accurate to 10^{-6} .

Similarly, we verify that $\nabla \cdot \mathbf{B} = 0$, $\nabla \times \mathbf{B} = 0$, and $\nabla \cdot \mathbf{A} = 0$ to machine precision.