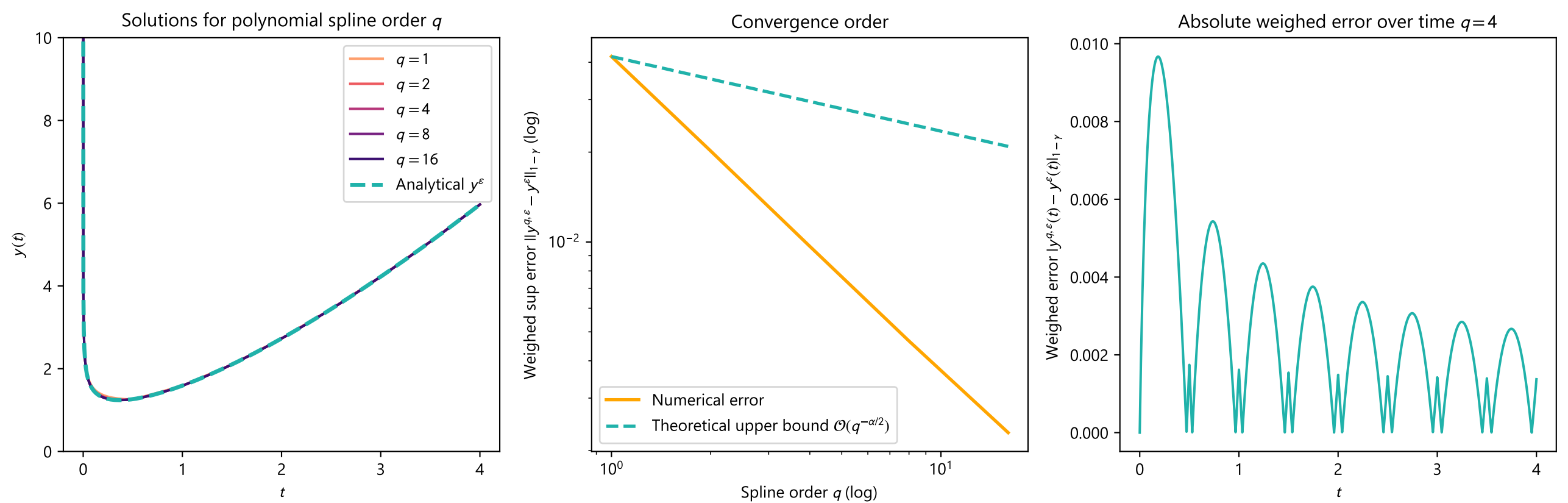
Solutions for polynomial spline order q
$q=1$
$q=2$
$q=4$
$q=8$
$q=16$
Analytical y^{ε}
$y(t)$
t
Convergence order
Weighed sup error $\|y^{q,\varepsilon}-y^{\varepsilon}\|_{1-\gamma}$ (log)
10^{-2}
Numerical error
Theoretical upper bound $\mathcal{O}(q^{-\alpha/2})$
10^{0}
10^{1}
Spline order q (log)
Absolute weighed error over time $q=4$
Weighed error $|y^{q,\varepsilon}(t)-y^{\varepsilon}(t)|_{1-\gamma}$
t