## Variation of Parameters

Works always, but is more work.
Inhomogeneous equation:

$$
a_{0} y+a_{1} y^{\prime}+a_{2} y^{\prime \prime}+a_{3} y^{(3)}+\ldots+a_{n} y^{(n)}=q
$$

where $q \neq 0$.
First solve the homogeneous equation, then allow its integration constants to vary.

