

1 | **Complete the Representation**

Function	First four terms	Generalized
$\frac{1}{1-2x}$	$1 + 2x + 4x^2 + 8x^3 + \dots$	$\sum_{k=0} 2^k x^k$
$\cos(3x)$	$1 - \frac{9x^2}{2!} + \frac{81x^4}{4!} - \frac{729x^6}{6!} + \dots$	$\sum_{k=0} \frac{(-1)^k (3x)^{2k}}{2k!}$
$\frac{e^x}{e^2}$	$\frac{1}{e^2} + \frac{x}{e^2} + \frac{x^2}{e^2 2!} + \dots$	