1 Series Notation 1

Write out the first four nonzero terms in the series:

(a)

$$\sum_{n=0}^{\infty} \frac{1}{n!}$$

(b)

$$\sum_{n=1}^{\infty} \frac{(-1)^n}{n!}$$

(c)

$$\sum_{n=0}^{\infty} (-2)^n \, \theta^{2n} \tag{1}$$

2 Series Notation 2

Write (a good guess for) the following series using sigma ($\sum$) notation. (If you only know a few terms of a series, you don't know for sure how the series continues.)

(a)

$$1 - 2\,\theta^2 + 4\,\theta^4 - 8\,\theta^6 + \ldots$$

(b)

$$\frac{1}{4} - \frac{1}{9} + \frac{1}{16} - \frac{1}{25} + \ldots$$