

Determine whether the series converges or diverges.
If a series converges, approximate its value accurate within 0.05

1.
$$\sum_{k=1}^{\infty} (-1)^{k+1} \frac{3k^2}{7k^2 + k + 1}$$

4.
$$\sum_{k=1}^{\infty} (-1)^{k+1} \frac{1}{2^k}$$

2.
$$\sum_{k=1}^{\infty} (-1)^{k+1} \frac{1}{\sqrt[3]{k}}$$

5.
$$\sum_{k=1}^{\infty} \frac{(k+1)!}{(k+2)!}$$

3.
$$\sum_{k=5}^{\infty} \frac{1}{\sqrt[3]{k} + 1}$$

6.
$$\sum_{k=5}^{\infty} (-1)^k \frac{k!}{(k+1)!}$$