Determine whether or not each series converges or diverges.
If it converges, approximate the sum accurate within 0.01.

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

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

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

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

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