

Do the following series converge or diverge?

If a series converges, find the value to which it converges.

1.
$$\sum_{k=0}^{\infty} \frac{1}{3^k}$$

3.
$$\sum_{k=2}^{\infty} \frac{5^k}{2^k}$$

2.
$$\sum_{k=0}^{\infty} \frac{3}{(-7)^k}$$

4.
$$\sum_{k=5}^{\infty} \left(\frac{3}{4}\right)^k$$

Notice where k begins!