Use the integral test or the comparison test to decide whether the following series converge or diverge.

1. $\displaystyle\sum_{j=3}^{\infty} \frac{18j^2}{3j^3 - 1}$

2. $\displaystyle\sum_{i=4}^{\infty} \frac{2i^3}{(2i^4 - 14)^2}$

Use the ratio test to decide the convergence or divergence of

$$\sum_{k=12}^{\infty} \frac{10^k}{k!}.$$

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