

Name:

Section: 5 6 9 10

Determine if the following series converge or diverge. You may use any technique we've covered. Show your work and clearly state which test you are using.

1.
$$\sum_{n=1}^{\infty} \left(\frac{n-2}{2n} \right)^{2n}$$

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

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

$$4. \sum_{n=1}^{\infty} \frac{7^n}{(2n)!}$$

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

$$6. \sum_{n=1}^{\infty} \left(\frac{n-3}{n} \right)^n$$