

HW Quiz A Determine whether the series converges or diverges. Justify your answer

Name _____

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

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

3.
$$\sum_{n=2}^{\infty} \frac{1}{n\sqrt{\ln n}}$$

4.
$$\sum_{n=1}^{\infty} \frac{5^k}{3+4^k}$$

$$5. \sum_{n=1}^{\infty} \frac{3^n n^2}{n!}$$

$$6. \sum_{n=1}^{\infty} \left(\frac{2n}{n+1} \right)^n$$

$$7. \sum_{n=1}^{\infty} \frac{\sqrt{n^2 - 1}}{n^3 - 2n^2 + 5}$$

$$8. \sum_{n=1}^{\infty} \frac{(-1)^n \sqrt{n}}{n^3}$$