

Name _____

Determine if the series converges absolutely, converges, or diverges.

1)
$$\sum_{n=1}^{\infty} \frac{(-1)^n}{9n^{1/4} + 1}$$

2)
$$\sum_{n=1}^{\infty} (-1)^n \left(\frac{3}{4} - \frac{4}{n} \right)^n$$

3)
$$\sum_{n=1}^{\infty} \frac{(-1)^n}{n^{5/3}}$$

Find the infinite sum accurate to three decimal places.

$$4) \sum_{n=1}^{\infty} \frac{2(-1)^{n+1}}{3^n}$$

$$5) \sum_{n=1}^{\infty} (-1)^{n+1} \frac{1}{n^5}$$

$$6) \sum_{n=1}^{\infty} (-1)^{n+1} \left(\frac{1}{4^n} \right)$$

Answer Key

Testname: ALTERNATING SERIES WORKSHEET

- 1) Converges conditionally
- 2) Converges absolutely
- 3) Converges
- 4) 0.500
- 5) 0.972
- 6) 0.200