

SECTION 5.3: DIVERGENCE TEST

1. The Divergence Test:

2. For each series below, find the limit if the *terms* of the series and determine if the Divergence Test applies. If the test applies, draw a conclusion.

$$(a) \sum_{n=1}^{\infty} \frac{n}{40n + 30}$$

$$(b) \sum_{n=1}^{\infty} \frac{n}{40n^2 + 30}$$

$$(c) \sum_{n=1}^{\infty} 8^{(n-2)}$$

3. Explain how you know the following argument is FALSE:

The series $\sum_{n=1}^{\infty} a_n$ converges because $a_n \rightarrow 0$ as $n \rightarrow \infty$.