

9. [8 points] For each of the following, circle ALL that apply. There may be more than one correct answer for each part. You do not need to show any work for any part of this question.
- a. [4 points] Suppose  $P(t)$  is a **cumulative distribution function** (cdf) satisfying  $P(0.2) = 0.5$ . Which of the following **MUST** be true?

$$\lim_{t \rightarrow \infty} P(t) = 1$$

The median  $t$ -value is 0.2.

$$P(1) \geq 0.5$$

The mean  $t$ -value is 0.2.

NONE OF THESE

- b. [4 points] The series  $\sum_{n=1}^{\infty} (-1)^n \frac{n + \sin(n)}{n^{3.1}} \dots$

DIVERGES

CONVERGES CONDITIONALLY

CONVERGES

CONVERGES ABSOLUTELY

NONE OF THESE