childsmath $\int_M d\omega = \int_{\partial M} \omega$

Math 3A03
Poll Results

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Assignment 3: Topology

Question #1 Let $E = \{x : \sqrt{2} \leq x \leq \sqrt{3},\ x \notin \mathbb{Q}\}$. Considering E as a subset of $\mathbb{R}$, which of the following statements is true?

(A) E is open in $\mathbb{R}$;
(B) E is closed in $\mathbb{R}$;
(C) E is neither open nor closed in $\mathbb{R}$;
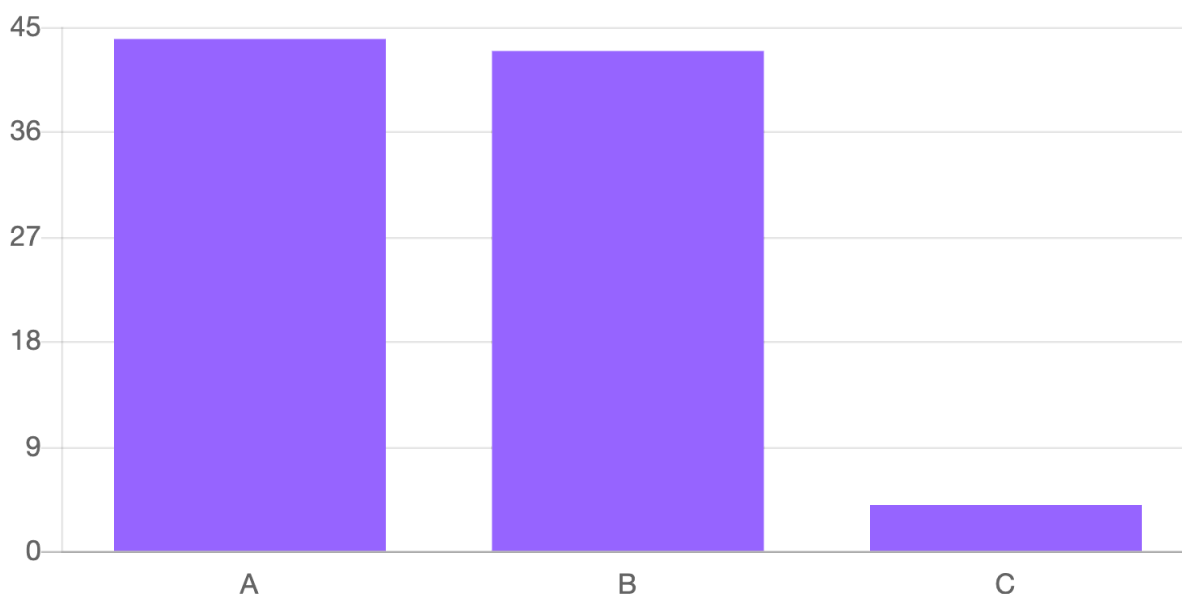(D) I have not had sufficient time to think about this yet.
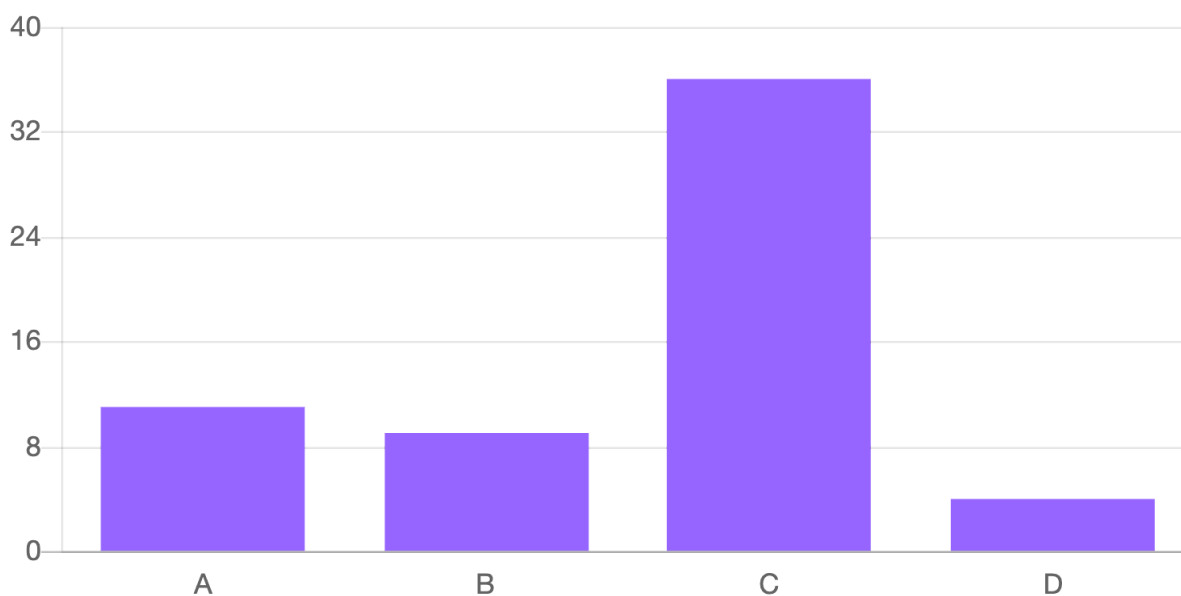
Question #2 Which of the following statements are true for a set $E \subseteq \mathbb{R}$?

(A) No interior point can be a boundary point;
(B) it is possible for an accumulation point to be a boundary point;
(C) every isolated point must be a boundary point;
(D) I have not had sufficient time to think about this yet.
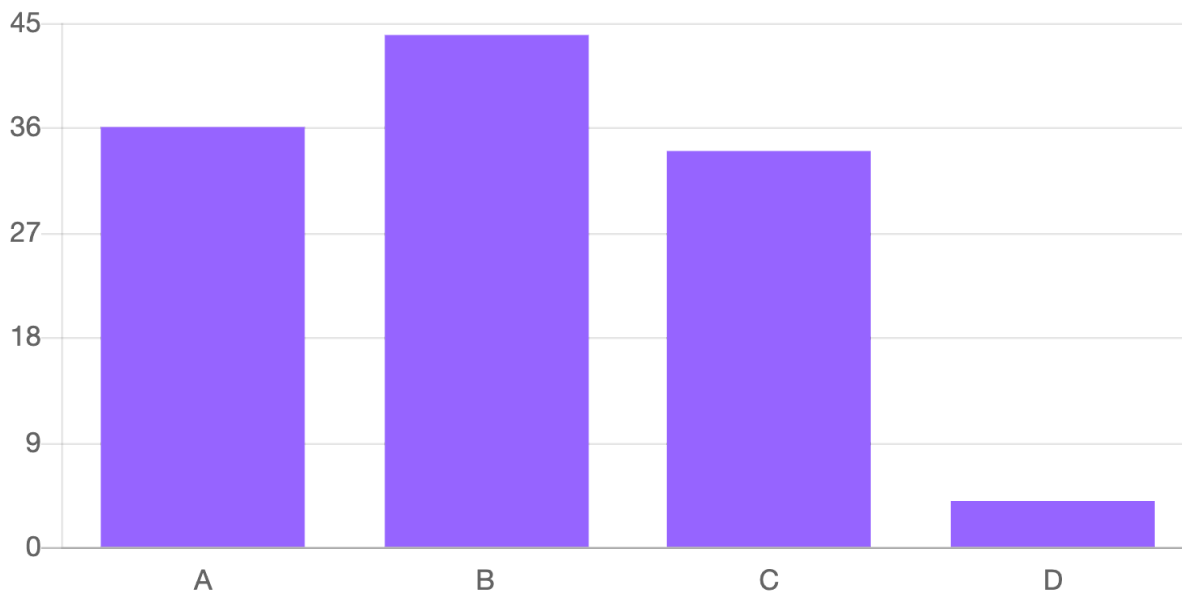
Question #3 Which of the following statements are true?

(A) a set E is closed iff $\overline{\overline{E}} = E$;
(B) a set E is open iff $E^\circ = E$;
(C) I have not had sufficient time to think about this yet.

Question #4 Let $E = [0, 1]$ be the closed unit interval. Which of the following statements are true?

(A) E can be expressed as an intersection of a sequence of open sets;
(B) E can be expressed as a union of a sequence of open sets;
(C) E can be expressed as a union of uncountably many open sets;
(D) I have not had sufficient time to think about this yet.

Poll Results