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

Math 3A03
Poll Results

earn

Metric spaces: ℓ^∞

Question #1 In the metric space ℓ^∞, i.e., bounded sequences (x_n) with distance given by the sup-norm,

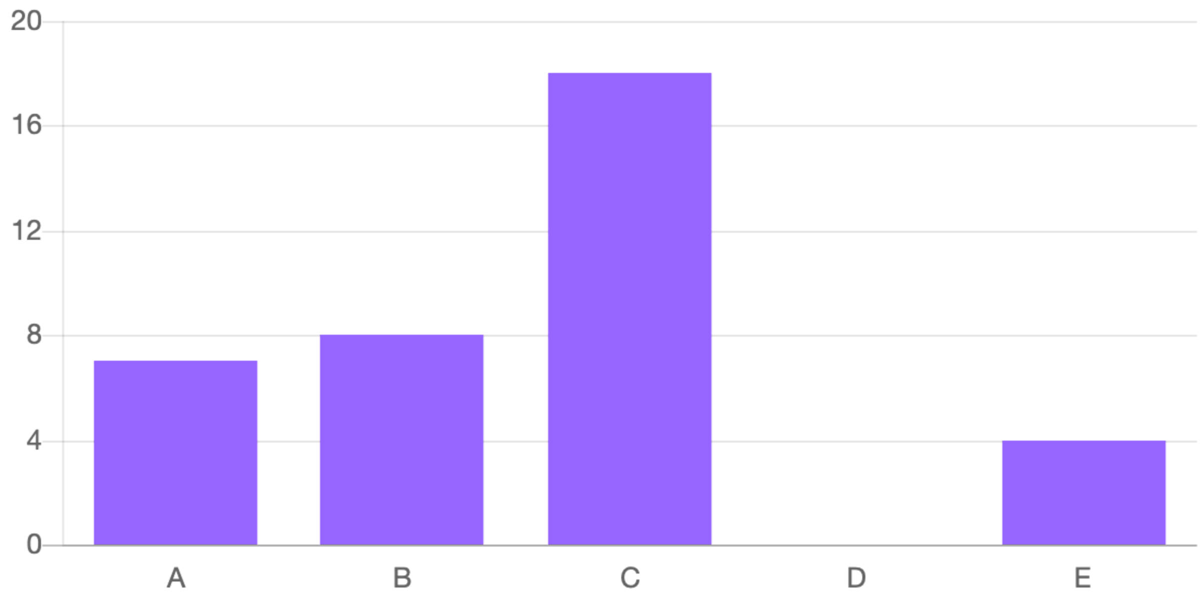
$$d(x,y) = \|x-y\|_\infty = \sup\{|x_n - y_n| : n \in \mathbb{N}\},$$

let

$$E = \{(x_n) \in \ell^\infty : 0 < x_n < 1, \forall n \in \mathbb{N}\}.$$

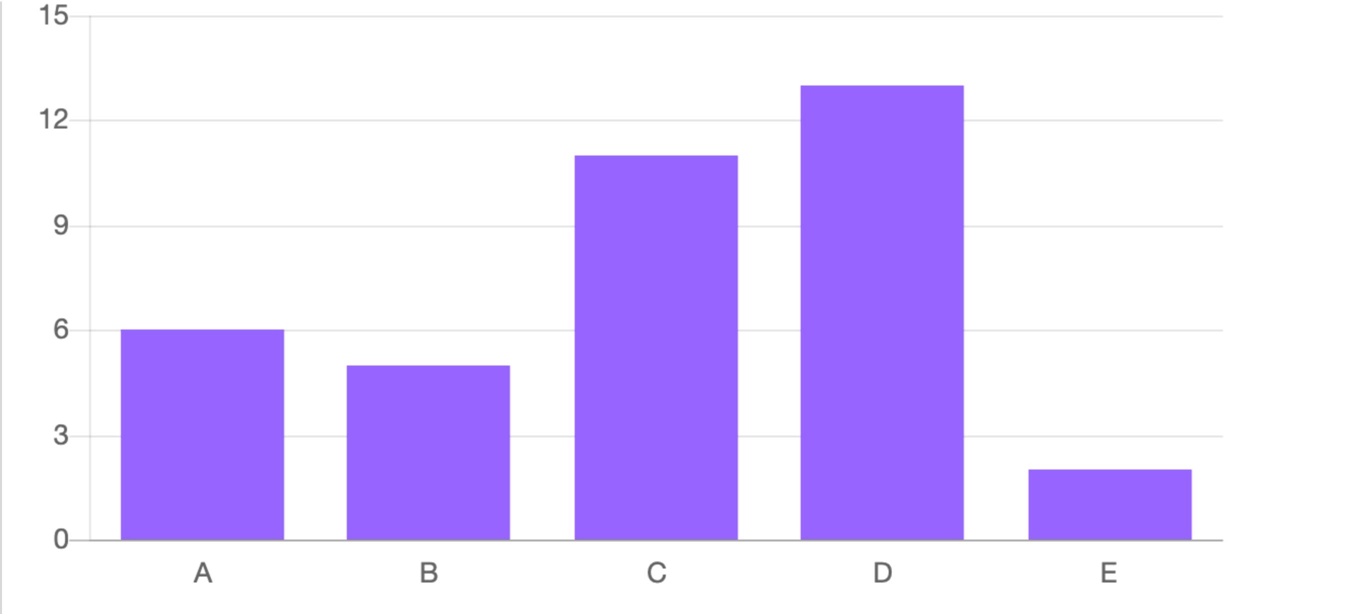
The interior E° of the set E is:

(A) the empty set $\emptyset$;
(B) a non-empty subset of E that is not all of E;
(C) all of E;
(D) all of ℓ^∞;
(E) a black hole.



Question #2 The closure $\overline{E}$ of the set E is:

(A) the empty set $\emptyset$;
(B) a non-empty subset of E that is not all of E;
(C) $E \cup \{0,1\}$;
(D) $\{(x_n) \in \ell^\infty : 0 \le x_n \le 1, \forall n \in \mathbb{N}\}$;
(E) a black hole.


15
12
9
6
3
0
A
B
C
D
E