Math 403, section 5

Draw some pictures

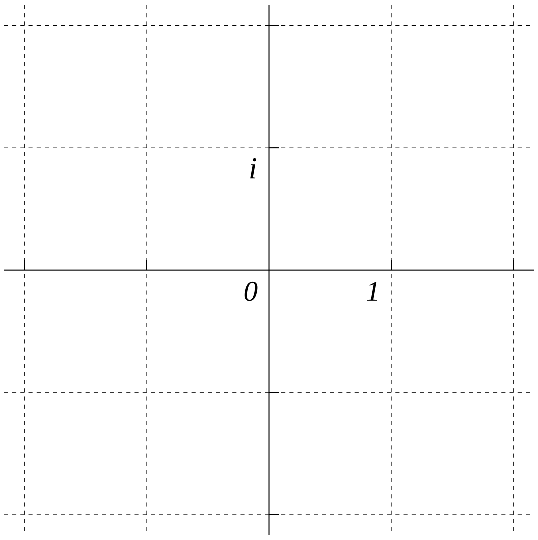
January 24, 2001

Name ______________________________

Carefully sketch each of the collections of complex numbers. For each of them, answer the following questions (use Y for "yes" and N for "No"):

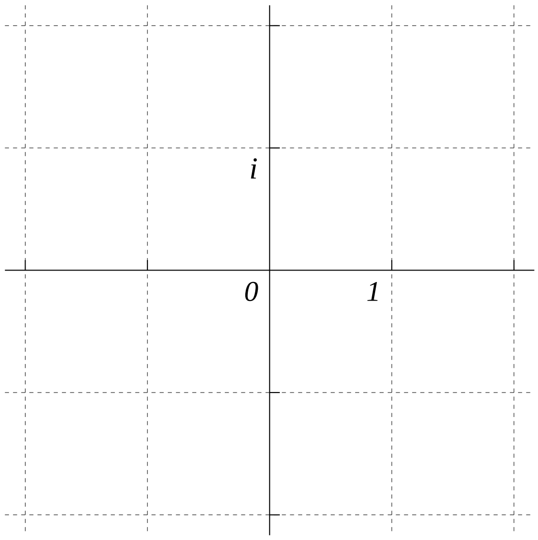
Is this set open? Is this set closed? Is this set a region?

A: z's so that $\operatorname{Re} z < 0$.



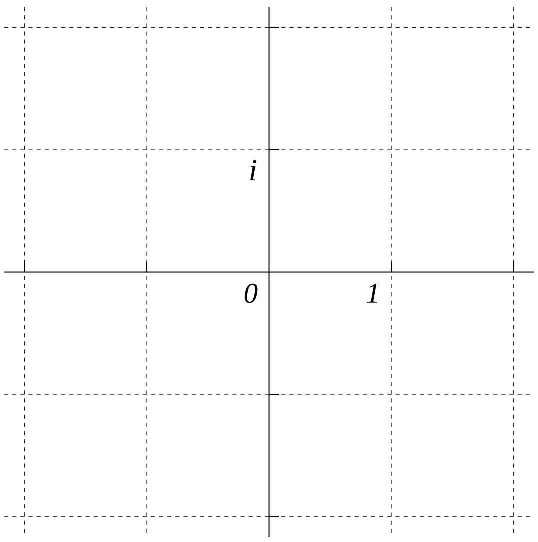
Open? ___ Closed? ___ A region? ___

B: z's so that $0 < |z| \leq 1$.



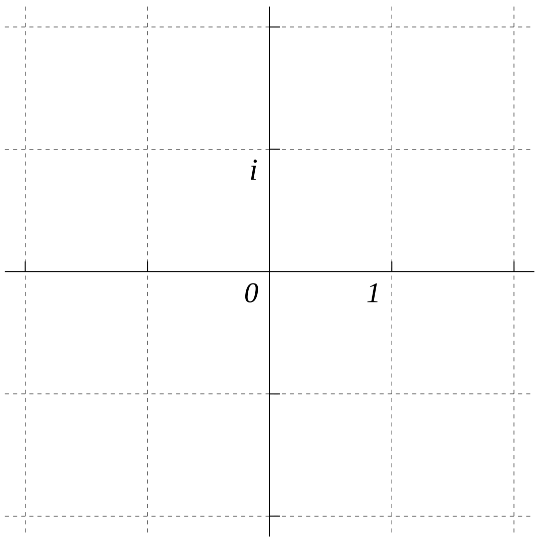
Open? ___ Closed? ___ A region? ___

C: z's so that $\frac{1}{2} < \operatorname{Im} z$ <u>and</u> $1 < |z| < 2$.



Open? ___ Closed? ___ A region? ___

D: z's so that $0 < \operatorname{Im} z < 1$ <u>and</u> $1 < |z| < 2$.



Open? ___ Closed? ___ A region? ___