

Homework 5 Solutions

MTH 327H

4. The interior of A is $\text{int } A = A$, since $A = S \cap ((.5, 2) \times (2, 2.3))$ is already open in S . All of the limit points of A in \mathbb{R}^2 are also contained in S , so we see \overline{A} is the closed rectangle $[\underline{.5}, 1] \times [2, 2.3]$. The interior of B is empty (every point is isolated) and the closure is $\overline{B} = B$ because the only limit point of B in \mathbb{R}^2 , namely $(0, 2)$, is not an element of S .