1. (2 pts.) Suppose that $\langle x_n \rangle$ is an infinite sequence. What does it mean to say that $\langle x_n \rangle$ is a Cauchy sequence? [Hint: This is really a request for the definition!]

2. (2 pts.) Complete the equation below to provide the definition of limit supremum of a sequence $\langle x_n \rangle$. [Note: This is also called the limit superior.]

lim sup x_n =

3. (2 pts.) Complete the equation below to provide the definition of limit infimum of a sequence $\langle x_n \rangle$. [Note: This is also called the limit inferior.]

lim inf x_n =

4. (2 pts.) What does it mean to say that a real number l is a limit of an infinite sequence $\langle x_n \rangle$? [Hint: This is really a request for the definition!]

5. (2 pts.) What does it mean to say that $l = -\infty$ is a cluster point of the infinite sequence $\langle x_n \rangle$? [Hint: This is really a request for the definition!]