Topics Covered:

Cauchy Sequence: (Ch. 3, # 17). Know the definition for Cauchy sequence.

Theorem: Every Cauchy sequence $s_n \in R$ converge to a point in $R$. So $R$ is complete.

Be able to prove that a sequence is Cauchy using the definition.

Connected Sets (Ch. 12):

Definition of disconnected set. Be able to use this definition to prove that sets are disconnected.

Set is connected if it is not disconnected.

Theorems related to Connected Sets:

1. Every interval is a connected set.
2. If a set in $R$ is connected then it is an interval (or a point or the null set).
3. If $S$ is connected then $f(S)$ is connected.

Know the statement of the Intermediate Value Theorem and be able to use the theorem (particularly to find when a function equals zero).