Week 6 In-Lab

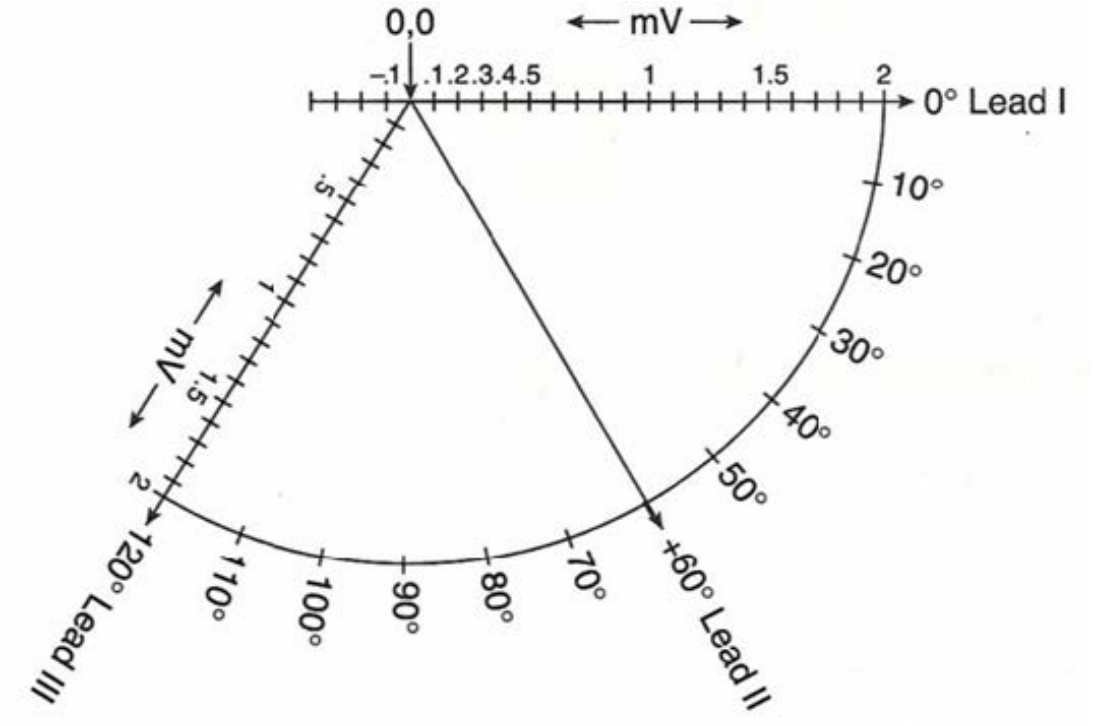
BIOE 320 Systems Physiology Laboratory

Data Analysis

Table 1: Mean R wave amplitudes for leads I and III in various conditions

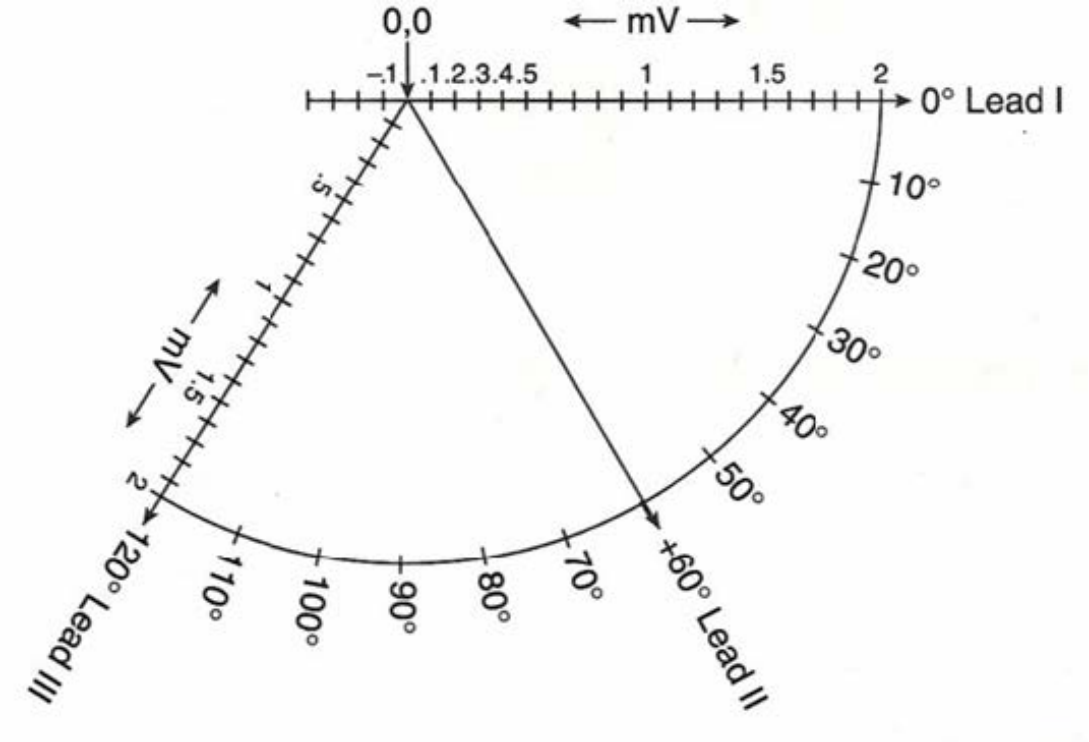
Condition (n>8)	Mean amplitude (mV, lead I)	Mean amplitude (mV, lead I)
Supine		
Sitting Up		
Inhaling		
Exhaling		

2. Using data from the table, graphically determine the Mean Electrical Magnitude and Mean Electrical Axis for the conditions of Supine and Sitting Up.



3. Explain the difference (if any) in the amplitudes of Leads I and III, as well as the Mean Electrical Magnitude and Axis under the two conditions.

4. Using data from the table, graphically determine the Mean Electrical Magnitude and Mean Electrical Axis for the conditions of Inhaling and Exhaling.



5. Explain the difference (if any) in the amplitudes of Leads I and III, as well as the Mean Electrical Magnitude and Axis under the two conditions.

6. Give normal ranges of the mean electrical axis. Is your data within range?

7. What factors affect the orientation of the mean electrical axis (list at least 2)?

8. What factors affect the amplitude of the R wave recorded on the different leads (list at least 2)?

9. It is unlikely your ECG data looks exactly like "textbook" data. List at least 3 sources of experimental error.