Analyzing the heart with EKG **Name Andrew Toepfer, Michael Weiner, Tony Tufano**

Group Names

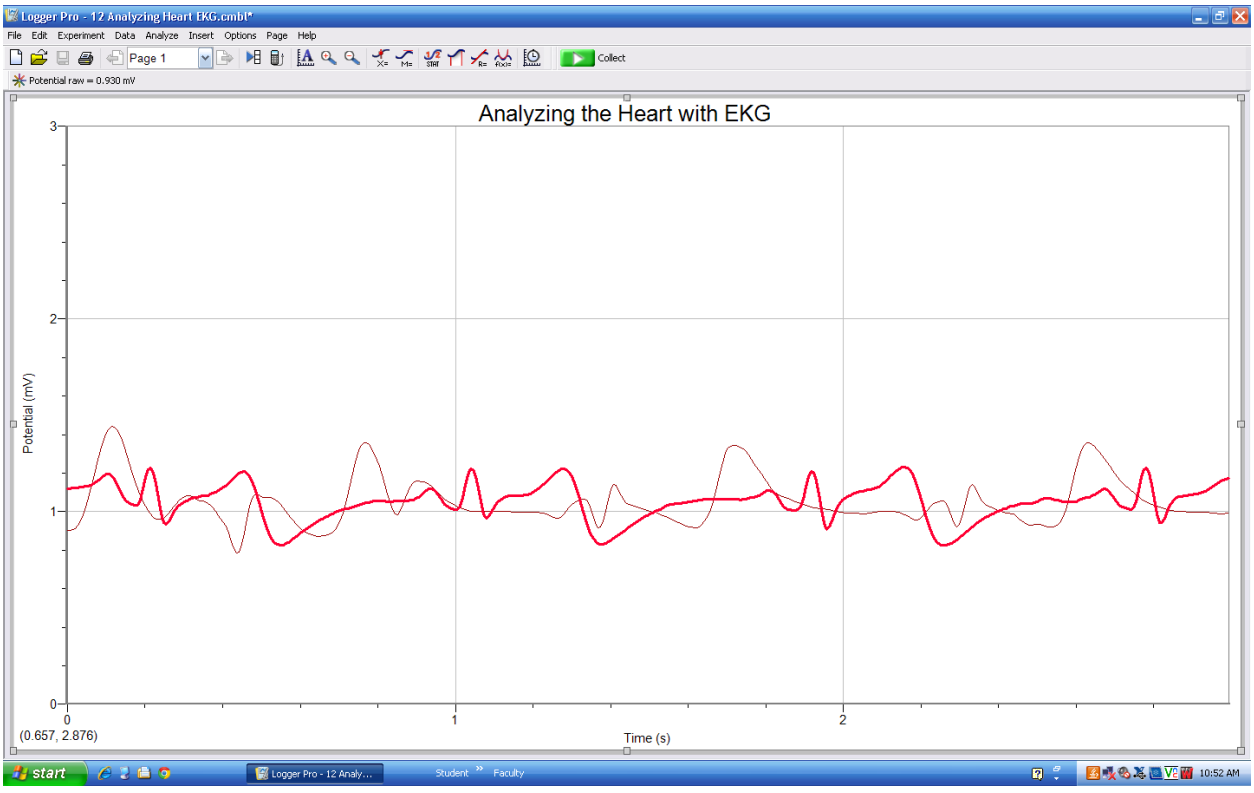
Table 1

Interval	Time(s)	Heart Rate(bpm)	73.2 BEATS PER MIN
P-R	0.41-0.55		
QRS	0.55-0.63		
Q-T	0.55-1.32		
R-R	0.59-1.76		

Table 2 Standard Resting Electrocardiogram Interval Times

P-R interval	0.12 to .20 s
QRS interval	Less than 0.12
Q-T interval	0.3-0.4 s

Graphs with Descriptions

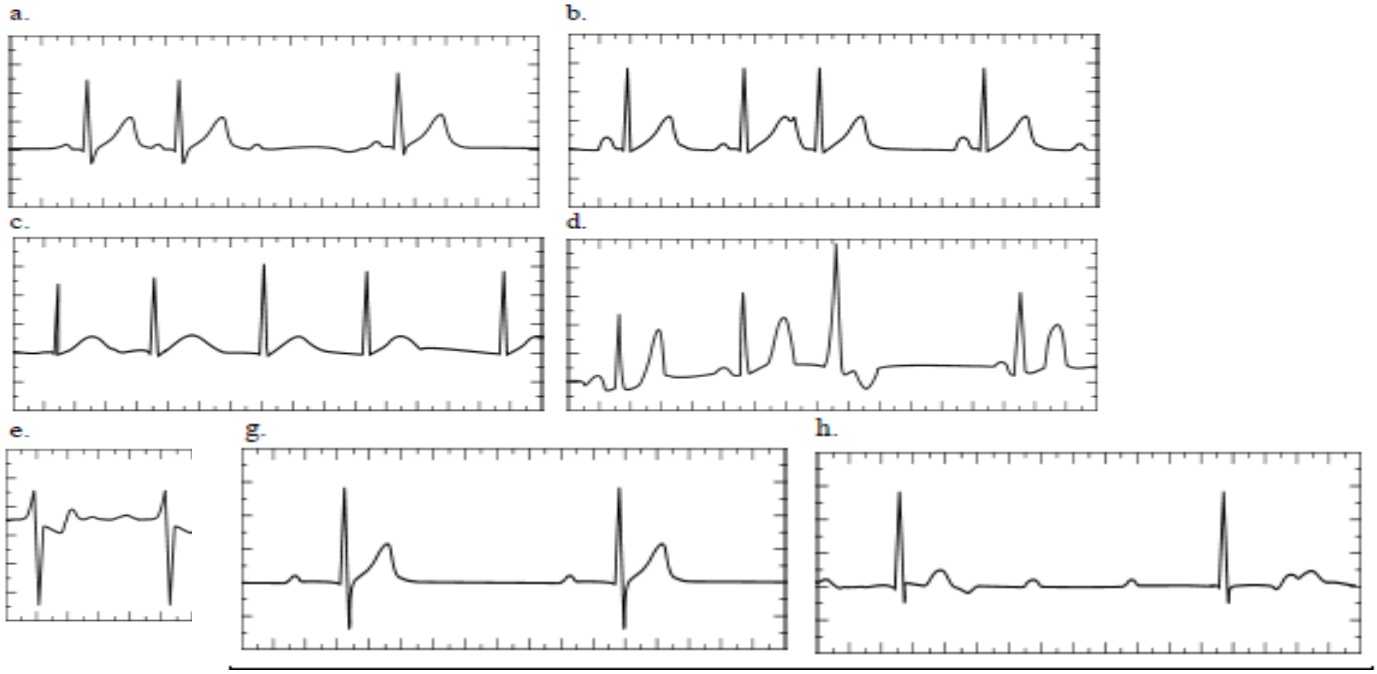


Data Analysis

1. Remember that a positive deflection indicates electrical activity moving toward the green EKG lead. Examine the two major deflections of a single QRS complex (R wave and S wave) in your EKG tracing from Part I of this experiment. According to this data, does ventricular depolarization proceed from right to left or left to right? How does your tracing from Part II confirm your answer?

2. Health-care professionals ask the following questions when interpreting an EKG:
- Can all components be identified in each beat?
- Are the intervals between each component and each complex consistent?
- Are there clear abnormalities of any of the wave components?

Using these questions as guides, analyze each of the following three-beat EKG tracings and record your conclusions in Table 3 (indicate presence or absence of the P wave, and whether other intervals and/or shapes are normal or abnormal). The first analysis (a) is done for you.



		P Wave		PR interval		QRS Interval		QRS Shape		TWave Shape	
ECG	Beats	Pres.	Abs.	Nml	Abs./Abn	Nml	Abs./Abl	Nml	Abn.	Nml	Abs./Abn.
a	1	X		X		X		X		X	
	2	X		X		X		X		X	
	3	X			X		X		X		X
	1	X		X		X			X	X	

b	2	X		X		X			X	X	
	3	X				X			X	X	
c	1		X			X			X	X	
	2		X			X			X	X	
	3		X			X			X	X	
d	1	X				X			X	X	
	2	X				X			X	X	
	3		X			X			X		X
e	1		X			X			X	X	
	2	X				X			X	X	
	3	X				X			X	X	
f	1	X				X			X	X	
	2	X				X			X	X	
	3	X				X			X	X	
g	1	X				X		X		X	
	2	X				X		X		X	
	3	-	-			-		-	-	-	-
h	1	X				X				X	
	2	X				X					X
	3	-	-			-	-	-	-	-	-