

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_ **EKG LAB**

What is an EKG? \_\_\_\_\_

Describe the following electrical events during an EKG:

P wave: \_\_\_\_\_

Q wave: \_\_\_\_\_

R wave: \_\_\_\_\_

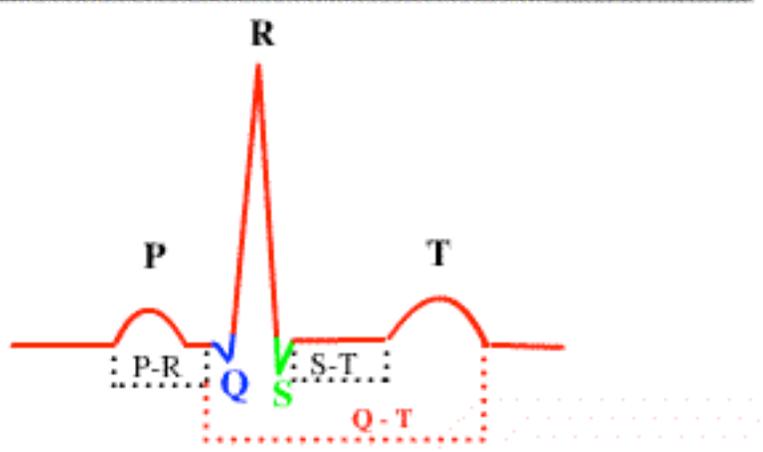
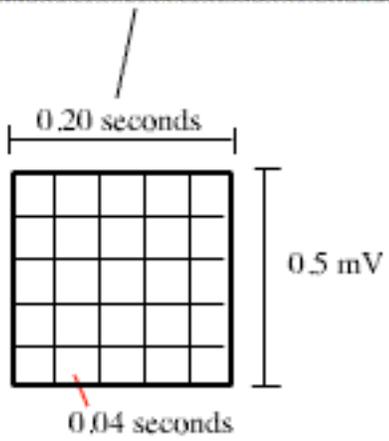
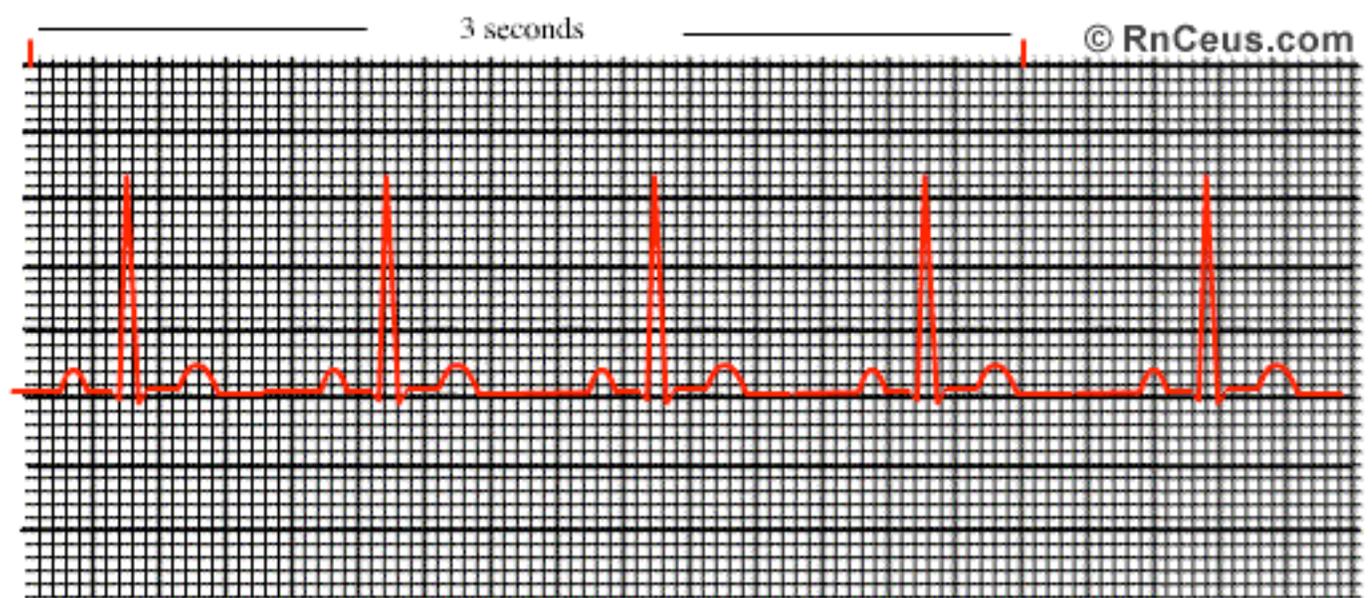
S wave: \_\_\_\_\_

QRS complex: \_\_\_\_\_

ST Segment: \_\_\_\_\_

T wave: \_\_\_\_\_

Calculate the heart rate in beats/min using the EKG data. Show your work.



Interval	Time (s)
P-R	
QRS	
Q-T	
Heart Rate	_____ beats/min

Go the following web pages. Draw a sample EKG that illustrates the problem with the patient. Include possible causes and treatments. Please look up what the treatments do. Example: explain what digitalis is and its cause.  
Compare to the Normal EKG

Diagnosis	Cause	Treatment(s)
Sinus Arrhythmia <a href="http://www.nceus.com/ekg/ekgsa.html">http://www.nceus.com/ekg/ekgsa.html</a>		
Atrial fibrillation <a href="http://www.nceus.com/ekg/ekgafib.html">http://www.nceus.com/ekg/ekgafib.html</a>		
Sinus Tachycardia <a href="http://www.nceus.com/ekg/ekgst.html">http://www.nceus.com/ekg/ekgst.html</a>		
3rd Degree Heart Block or complete <a href="http://www.nceus.com/ekg/ekgthird.html">http://www.nceus.com/ekg/ekgthird.html</a>		
Sinus Bradycardia <a href="http://www.nceus.com/ekg/ekgsb.html">http://www.nceus.com/ekg/ekgsb.html</a>		
Premature Ventricular Contractions <a href="http://www.nceus.com/ekg/ekgpvc.html">http://www.nceus.com/ekg/ekgpvc.html</a>		

1. The electrocardiogram is a powerful tool used to diagnose certain types of heart disease. Why is it important to look at the time intervals of the different waveforms?
  
2. What property of heart muscle must be altered in order for an EKG to detect a problem? Explain.
  
3. Based on what you have learned regarding electrocardiograms, can they be used to diagnose all heart diseases or defects? Explain and use an example.
  
4. Describe a cardiovascular problem that could be diagnosed by a cardiologist using an electrocardiogram.
  
5. What is a heart block? What is the difference between a First Degree heart block and a 2:1 heart block. Explain
  
6. An Asystole has what appearance on the EKG?
  
7. Explain the digitalis effect.
  
8. What causes hypercalcemia? Explain the patterns on the EKG.
  
10. How does Premature Atrial Contraction (PAC) affect the patient?
  
11. What is Tachycardia, Sinus Rhythm and what are its common causes?
  
12. What is the difference between Ventricular Fibrillation (VFIB) and Ventricular Tachycardia (VTAC)