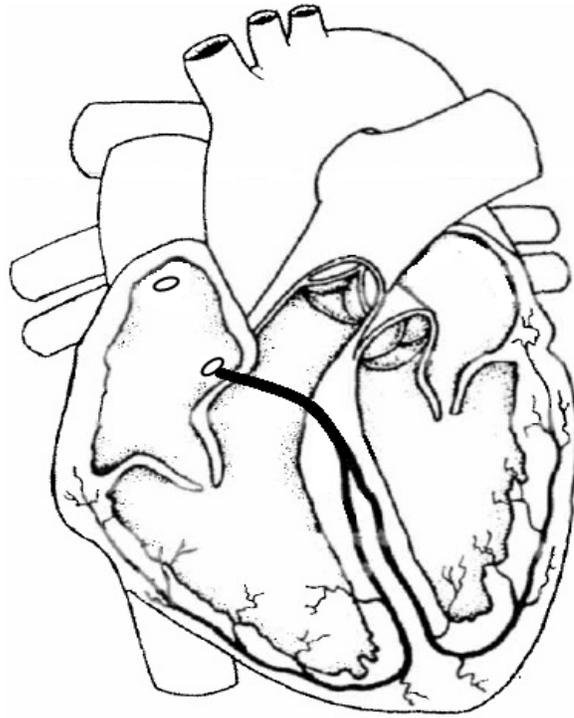


**Section 12.2- Physiology of the Heart
Regular Anatomy**

Using the list below, label the different parts of the cardiac conduction system.



Atrioventricular bundle
Atrioventricular node

Left bundle branch
Purkinje fibers

Right bundle branch
Sinoatrial node

1. Using green, draw the path of the electrical impulse as it travels through the cardiac conduction system.
2. Using purple, draw and label a papillary muscle.
3. Using pink, draw and label chordae tendinae from the papillary muscle you drew.
4. What is the function of heart valves?

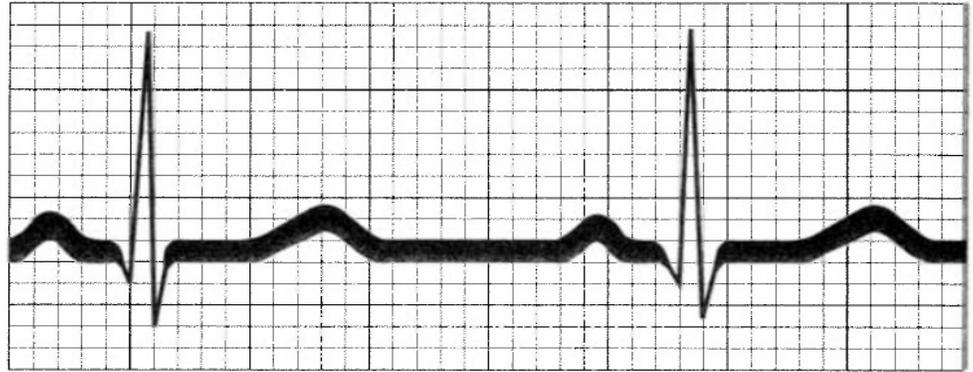
Complete the paragraph about the cardiac conduction system.

Contraction of the 1 and 2 is coordinated by specialized 3 _____ cells in the wall of the heart. The cardiac conduction system begins when the 4 _____, or pacemaker, generates a spontaneous action potential. The action potential then spreads throughout the walls of the 5 causing them to 6 . The action potential then spreads to the 7 _____ in the lower part of the right atrium. From here, the electrical impulse then travels down the 8 _____ before branching into the left and right 9 _____, located in the interventricular septum. The bundle branches then further divide into 10 _____, which extend into the ventricle walls. Bundle branches cause the 11 to contract, while Purkinje fibers cause 12 _____ to contract. The contraction of papillary muscles pulls on the 13 _____, which in turn pulls on the cusps of the atrioventricular 14 . Pulling on the cusps of the valves prevents blood from flowing 15 up into the 16 .

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____

Using the list below, label the different parts of an electrocardiogram.

- P-wave
- T-wave
- QRS Complex



Complete the sentence about the electrocardiogram.

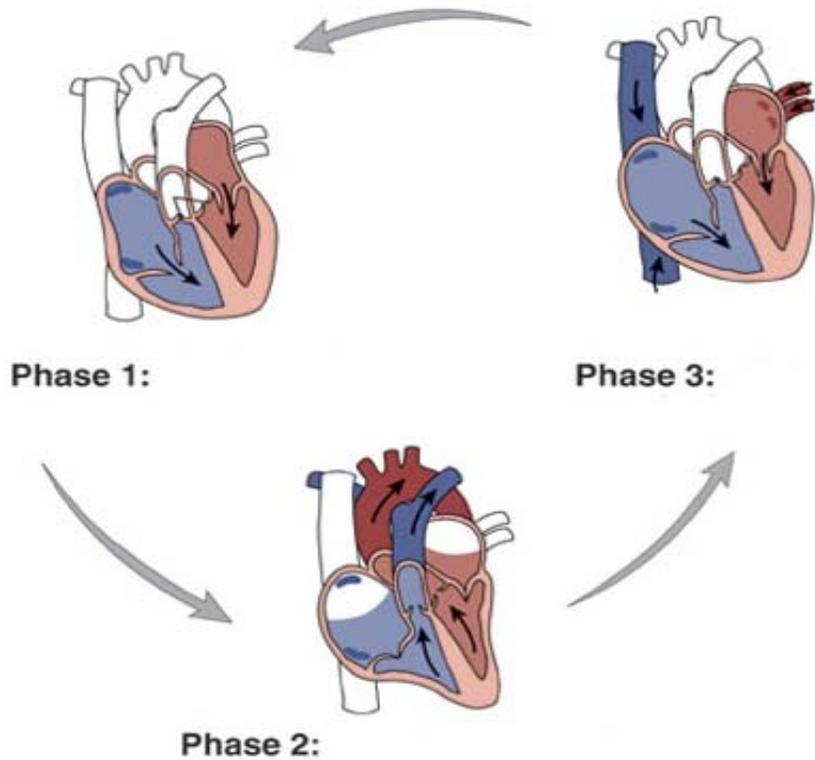
An electrocardiogram is a graph that records the
1 _____ of the 2 _____ during a
3 _____.

1. _____
2. _____
3. _____

4. Label the X and Y axis with the correct units.
5. The P-wave represents _____ of the atria.
6. The QRS complex represents depolarization of the _____.
7. The T-wave represents _____ of the ventricles.

Using the list below, label the 3 phases of the cardiac cycle.

- Atrial diastole
- Atrial systole
- Ventricular diastole
- Ventricular systole



1. _____ refers to the contraction of the myocardium.
2. _____ refers to the relaxation of the myocardium.
3. Heart sounds are due to the _____ of the heart closing.
4. The "LUB" sound is due to the _____ valves closing.
5. The "DUP" sound is due to the _____ valves closing.

Complete the table about the cardiac cycle.

	Name of Phase	Action of Atria Contracted/Relaxed	Action of Ventricles Contracted/Relaxed	Action of AV Valves Open/Closed	Action of SL Valves Open/Close
Phase 1					
Phase 2					
Phase 3					

6. _____ is the volume of blood pumped out of a ventricle in one minute.
7. Cardiac output is dependent on 2 factors: _____, which is beats per minute, and _____, which is the amount of blood pumped by a ventricle each time it contracts.