

MA112 Lab 2
Critical Thinking Questions
Week 4

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All Answers Must be in Complete Sentences

1. Why are red blood cells biconcave?
Red blood cells do not contain a nucleus, therefore they are biconcave. Being biconcave, allows RBCs to pass through narrow capillaries.

2. Why is a WBC differential so important when making differential diagnoses?
The differential gives a total number of each type of WBC and determines if the cells are in normal proportion to one another, if one type of WBC is increased or decreased, or if immature cells are present. Having a differential can help diagnose the cause of many illnesses. A differential test can help decide whether an infection is viral or bacterial in nature.

3. Why are patients who have relatively normal hemoglobin but a low hematocrit given packed cells rather than whole blood?

One unit of RBCs in an adult and 10mL/Kg in a pediatric patient will increase the hematocrit by approximately 3% or the hemoglobin by 1 g/dL

4. What is the normal shape of a red blood cell? A white blood cell?

The shape of a red blood cell is a biconcave disk with a flattened center. WBCs are irregular in shape, but have a nucleus and an outer buffer coat.