

PAL Worksheet

Week 11 Problem Set 1

Respiratory Physiology/ Acid Base Balance

1. Patient A is breathing 12 times/min with a tidal volume of 500 ml. Patient B is breathing 20 times/minute with a tidal volume of 300 ml. (Assume each has a dead space volume of 150 ml). Which patient has better alveolar ventilation? Explain.

2. For the following questions, mark each answer as either true or false:

Oxygen

- a. is mainly transported in the blood while bound to the hemoglobin in red blood cells. _____
- b. is as soluble as carbon dioxide in plasma. _____
- c. is the primary chemical drive for ventilation. _____

Carbon dioxide

- a. is primarily transported as a gas dissolved in the plasma. _____
- b. binds to hemoglobin in erythrocytes. _____
- c. may be considered an acid. _____

The PO_2 of the blood

- a. is a measure of the amount of oxygen dissolved in the plasma. _____
- b. is the most important factor determining the percent saturation of hemoglobin. _____
- c. is normal in anemia. _____
- d. is an accurate indicator of the total oxygen content of the blood. _____
- e. determines PO_2 of the alveoli. _____

