Name _____ Date _____ Period _____

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Cellular Respiration

Biology

Answer in complete sentences. Show your work for calculations.

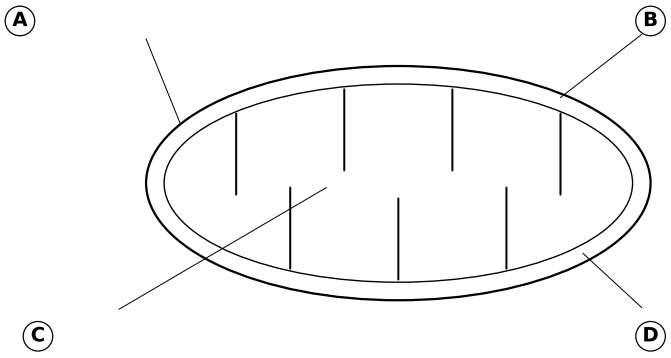
1. Cellular respiration: $C_6H_{12}O_6$ + ___ O_2 → ___ CO_2 + ___ H_2O + energy

(a) Write the missing coefficients to balance the equation.

(b) How many CO_2 are made when 7 glucose are respired?

2. The drawing shows a mitochondrion. Name the parts labeled A to D.

Choose from: outer membrane, inner membrane, matrix, space between the membranes.

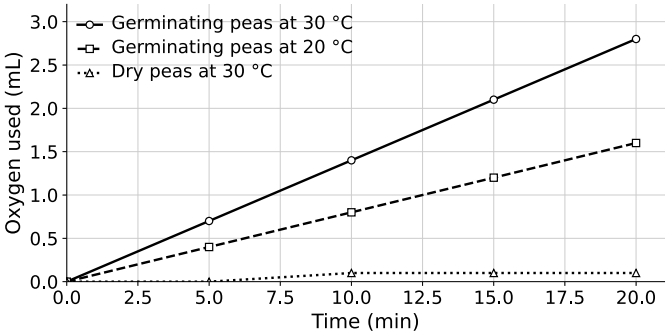


(a) A: _____ (b) B: _____

(c) C: _____ (d) D: _____

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3. Peas were sealed in respirometers, and the oxygen used was measured (sample data).



(a) Find the rate of O_2 use for the germinating peas at 30 °C, in mL/min.

(b) Why did the dry peas use almost no O_2?

4. In the model, about 32% of the energy in one mole of glucose (2,870 kJ) is captured in ATP and the rest is released as heat. How much energy is released as heat?

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