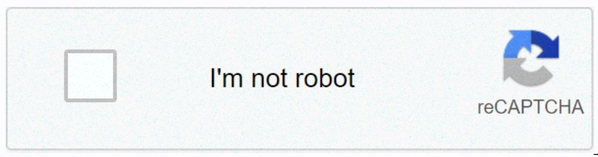

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Calorimetria exercicios resolvidos pdf

Calorimetry Portuguese English Calorimetry The body of 250 g of brass is heated from 0°C to 100°C, for this 2300 limes were used. Calculate: a) Specific brass heat; (b) the heat capacity of that body; c) If the body loses 1000 cal in the final situation, what will its temperature be? A mass body of 200 g is heated for 30 seconds by a heat source that provides a power of 210 watts at a constant rate. With regard to the temperature graph in the function of time (next to it), determine the heat capacity of the body knowing that 1 lime = 4.2 J. Determine the heat necessary to convert 100 g of ice to −10 °C in 100 g of steam at 100 °C. Also make a temperature chart depending on the amount of heat transformations. Ice-specific heat data: cg = 0.5 cal/g °C; latent melting heat: LF = 80 cal/g; water-specific heat: ca = 1.0 cal/g °C; Latent thermal evaporation: LV = 540 cal/g. The body has a mass of 500 grams and a specific heat of 0.4 g/cal°C. Specify: a) The amount of heat that the body must receive for its temperature to vary from 5 °C to 35 °C; b) The amount of heat that the body must give in to its temperature is reduced by 15 °C. Calorimetry View records 1 through 5 out of 6 records available. A metal block with a thermal capacity of 150 cal/°C is inside the oven. This block reaches the thermal balance after receiving 39kcal, does not change its state of aggregation. The temperature variation suffered by this block, in the Fahrenheit scale, is a) 246°F b) 289°F) 367°F d) 402°F i) 468°F for the increase in liqueurs and sublimation are, respectively, states A passes) solid to liquid and liquid gaseous. b) Solid for liquid and solid for gaseous. c) gaseous to liquid and solid to gaseous. d) Liquid and gaseous gaseous for solids. e) liquids for gaseous and gaseous solids. The rise of latent melting heat of ice is 80cal / g. This means that A) to raise the temperature of 1 g of ice to 1°C you need to provide you with a heat amount of 80 limes. b) To dissolve 10g of ice, but at melting temperature, you need to be supplied with 800cal. c) To raise the temperature of 40g of ice to 2°C you need to provide you with 80cal. D) If we provide 1cal to 1g of ice, its temperature will rise to 80 °C. E) If we deliver 80cal to 80g of ice, its temperature will rise to 1 °C. The rise of the Soft Drink Jar has an equivalent capacity of 8 cups of water and is filled halfway with water at 20 ° C. Then we put another glass of water in the jar with its own temperature of 80°C. What is the final temperature of the mixture, acknowledging the thermal exchange without loss? (A) 32°C (B) 35°C (C) 40°C (D) Ascent of 48°C (E) 54°C Nurse health decided to boil 1.0 liters of water in order to have a small reserve of sterile water. Busy, she forgot the boiling water and when she kept it she discovered there was 950mL left. The water density is known to be 1.0·103kg/m3, the latent heat of water evaporation is 2.3·106J/kg and is assumed to be a negligible mass of water that has evaporated or may have popped out of the tank during boiling. It can be confirmed that the energy wasted in the transformation of steam water was approximately: A) 25000J. B) 115000J. C) 230000J. D) 330000J. E) 460000J. Rise Tools for teachers or students Battery ENEM questions that are asked up to reaching 1,000 points. Points are obtained for efficiency and questions increase or decrease in value because the above issues are resolved or misplaced. Set criteria for compiling a test by selecting discipline, filtering questions by subject, institution, or amount of problems within a personalized test. Set criteria for compiling a simulation, filtering questions by question, institution, or amount of problems within custom evidence. A series of questions that compare the quantities that encourage the reasoning of comparison and visual perception. Based on international exams such as gre graduate record exam. Battery ENEM issues that represent resolutions that need to be made to reach 1,000 points. Points are obtained for efficiency and questions increase or decrease in value because the above issues are resolved or misplaced. Battery logical-deductible logic or reasoning issues. It includes some concepts of algebra and geometry, but without so much emphasis on certain parts of mathematics. The global warming that is happening today stems from a small energy imbalance of about 0.3%, between the energy the Earth receives from the sun and the energy that radiates every second, just about 1 W/m2. This means that the Earth accumulates, annually, about 1.6 × 1022 J. Consider that the energy needed to convert 1 kg of ice to 0 °C into running water equal to 3.2 × 105 J. If all the energy accumulated per year were used to melt ice at the poles (at 0°C), the amount of melted ice per year, in trillions of tons, would be between) 20 and 40.b) 40 and 60.c) 60 and 80.d) 80 and 100.e) 100 and 120.J1. Aa) Exactly. That's exactly the definition .b) Wrong. Celsius degrees are thermometric scale.c) Wrong. If the cold body comes into contact with a body that is at a temperature different from its, it will come to heat.d) Wrong. It's a form of energy in transit from one body to another, when there's a temperature difference between them.e) Wrong. Temperature is the level of agitation of molecules.2. hello there. Wrong. If the reservoir is metal, a material that actually drives heat better, water will eventually lose heat more easily on the reservoir. That's not the right intention. That's exactly what it's for. Darker colors absorb the energy of light more.3. To the specific heat of water, with these units, means exactly that, in order to distinguish a degree Celsius from one gram of water, it is necessary to provide him with caloric energy.4. To melt 1 kg of ice at 0°C, we need 3.2 x 105J. The earth accumulates energy about 1.6 x 10^{22}J. We will make a simple rule of three rules, so that we know the mass of ice that energy accumulated by earth can dissolve.1kg ——3.2×105 Jmkg——1.6×10^{22}Jm = 1.6 ×10^{22}/ 3.2×105m= 0.5×1017kg = 50×1012 tonnes Page 2 Calorimetry is basically part of physics in which heat exchange between bodies is studied. We need to understand some concepts: TemperatureTemperature is the degree of agitation of molecules. The more upset it is, the higher the temperature. More agitated molecules in the body hot and less agitated in the cold body. There are several ways to measure temperature, but the 3 most common scales are: Kelvin, Celsius and Fahrenheit.Depending on the question it will be necessary to convert from one scale to another. The equation that binds these shells together is: Where, TC = temperature in degrees Celsius, TF = temperature in degrees Fahrenheit and TK = temperature in Kelvin.Thermometric scales with melting point temperature values and boiling pointHeat is energy exchanged between two bodies that may or may not lead to temperature change. Sensitive HeatType heat that causes variations in body temperature. Calculated by equation Q = m.c ΔT = C.ΔT, where m is the mass of the body, c is the specific heat of the material, C is the heat capacity of the body and ΔT is a variation of temperature. Common unit: lime (calories). Unit in SI: J (joule). Thermal capacity: characteristic of the body that determines how quickly the body heats or cools. Calculated by the ratio: C = m.c, where m is the mass of the body, and c is a specific heat. Common unit: cal/ºC. Unit in SI: Specific J/KHeat: characteristic of the substance from which the material is made. Common unit: cal/gºC.Unit in SI: J/kg. K.Latent heatType heat that causes a change in the physical condition of the body. Formula: Q = m.L, where m is the body mass and L is the latent heat of melting or boiling. Common unit: lime (calories). Unit in SI: J (joule). Keep in mind that changes in the state that occur with heat loss have negative latent heat (firming and condensation). In sloping parts the heat is sensitive, and in horizontal parts the heat is a latentThermal balance formed when the bodies that make up the analysed system with Same. If one body is warmer than the other and there is an interaction between them, the warmer body gives heat to a less hot body.E.: The hot cup coffee system is in thermal balance from the moment the cup warmed up and got the same temperature as the coffee. Remember: The sum of the amount of heat exchanged between the bodies must be zero.1. (UEL-PR) A man uses fire to form a number of dishes. For example, the oven is necessary for the work of blacksmiths in making horseshoes. For this, the iron is heated until moldy. Given that the iron mass used in the production of horseshoe is 0.5 kg, that the temperature at which iron becomes moldy is 520 °C and that the specific heat of iron is worth 0.1 cal/g °C, mark the alternative that provides the amount of heat, in calories, that needs to be transferred to this iron mass in order to shine a blacksmith. Given: starting horseshoe temperature: 20ºC.a) 25b) 250c) 2500d) 25000e) 2500002. (UPE) Iron block from 500 g to 42°C is left inside the tank of negligible thermal capacity, containing 500 g of water at 20°C. What is the final equilibrium temperature? Data: Specific iron heat: cFe = 0.1 cal/g°C, water-specific heat: cagua = 1 cal/g°C.a) 10°Cb) 12°Cc) 15°Cd) 20°Ce) 22°C3. (UNESP) A thermal bag with 500 g of water at a starting temperature of 60 °C is used to treat the patient's back pain. After a certain time from the beginning of the treatment, the water temperature contained in the bag is 40 °C. While the specific heat of the water is 1 cal/(g·°C), and assuming that 60% of the heat provided by the water is absorbed in the patient's body, the amount of calories received by the patient in treatment was equal to aa) 2 000.b) 4 000.c) 6 000.d) 8 000.e) 10 000.Feedback 000.Jig