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| warmup  Write your lab station here: \_\_\_\_\_\_\_\_\_\_\_\_\_\_  Q = m cp ∆T  if the following is true  Q = 3001 joules Cp = 4.184 J/gram-°C  Tfinal = 40.0 °C  Tinitial = 23.0°C  Solve for ∆T  Solve for m. |  | warmup  Write your lab station here: \_\_\_\_\_\_\_\_\_\_\_\_\_\_  Q = m cp ∆T  if the following is true  Q = 3001 joules Cp = 4.184 J/gram-°C  Tfinal = 40.0 °C  Tinitial = 23.0°C  Solve for ∆T  Solve for m. |
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| lab instructions  The balanced equation for the combustion reaction of CH4 (methane) is  \_\_\_\_\_\_\_+\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_+\_\_\_\_\_\_\_\_  ∆H = ΔH = -890 kJ  DATA  For a can of water heated by a Bunsen Burner, record the following ON PAPER TO HAND IN (not on this scrap of paper):  Minutes of heating, amount of water (grams or mL), initial and final water temperature (°C)  CALCULATIONS  ON PAPER TO HAND IN…   1. Use Q = m cp ∆T to find the amount of heat that entered the water. 2. Find the number of moles of methane that were burned using information at the top of this page. 3. Find how many liters per minute come out of the burner, using information you measured and 22.4 L = 1 mole of any gas (we are close enough to STP for the error to be less than 10%.)   Put your name on the paper and hand it in. |  | lab instructions  The balanced equation for the combustion reaction of CH4 (methane) is  \_\_\_\_\_\_\_+\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_+\_\_\_\_\_\_\_\_  ∆H = ΔH = -890 kJ  DATA  For a can of water heated by a Bunsen Burner, record the following ON PAPER TO HAND IN (not on this scrap of paper):  Minutes of heating, amount of water (grams or mL), initial and final water temperature (°C)  CALCULATIONS  ON PAPER TO HAND IN…   1. Use Q = m cp ∆T to find the amount of heat that entered the water. 2. Find the number of moles of methane that were burned using information at the top of this page. 3. Find how many liters per minute come out of the burner, using information you measured and 22.4 L = 1 mole of any gas (we are close enough to STP for the error to be less than 10%.)   Put your name on the paper and hand it in. |
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