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| Q | Specific Heat WS #2 |
| **1** | How much heat is lost when a 640 g piece of copper cools from 375 °C, to 26 °C? (The specific heat of copper is 0.38452 J/g°C) |
| **2** | The specific heat of iron is 0.4494 J/g°C. How much heat is transferred when a 24.7 kg iron ingot is cooled from 880 °C to 13 °C |
| **3** | How many grams of water would require 2.20 x 104 calories of heat to raise its temperature from 34.0 °C to 100.0 °C? (Remember the specific heat of water is 1.00 cal/g x °C) |
| **4** | 8750 J of heat are applied to a piece of aluminum, causing a 56 °C increase in its temperature. The specific heat of aluminum is 0.9025 J/g °C. What is the mass of the aluminum? |
| **5** | Find the mass of a sample of water if its temperature dropped 24.8 °C when it lost 870 J of heat. |
| **6** | Find the specific heat of an unknown metal with an initial temperature of 16.0 °C, when 3500 Joules are applied to a 40.0g sample and the final temperature is 81.0 °C. |
| **7** | What must be the specific heat of a sample of an unknown material of 36.359g, when 59.912 J of heat are applied raising the temperature 152.0°C? |
| **8** | What would be the final temperature of a 73.174g sample of cobalt with an initial temperature of 102.0 °C, after it loses 6800 J? (Note the specific heat of cobalt is 0.4210 J/g°C) |
| **9** | How much heat is gained when a 50.32 g piece of aluminum is heated from 9.0°C to 16°C? |
| **10** | How many degrees would the temperature of a 450 g ingot of iron increase if 7600 J of energy are applied to it? (The specific heat of iron is 0.4494 J/g°C) |
| **11** | A 250 g sample of water with an initial temperature of 98.8 °C loses 7500 joules of heat. What is the final temperature of the water? |
| **12** | Copper has a specific heat of 0.38452 J/g°C. How much change in temperature would the addition of 3,500 Joules of heat have on a 538.0 gram sample of copper? |

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