**Extra Practice - Calculations - Table method**

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| **Conversion factors** |
| **Density of water** | **1 g = 1 mL** |
| **Specific heat of water** | **1 cal = 1 g ℃** |
| **Energy content of Fat** | **1 g = 9 kcal** |
| **Energy content of proteins or carbohydrates** | **1 g = 4 kcal** |
| **Molar mass of carbon** | **1 mol = 12.01 g** |
| **Avogadro’s number** | **1 mole = 6.02 x 1023 particles (atoms, molecules, formula units, ions)** |
| **Calorie Conversions** | **1 Calorie = 1 kilocalorie = 1000 calories** |
| **Calories and Joules** | **1 Calorie = 4.184 kilojoules** |

**Extra conversions**

1. **Convert 34 kJ into kcal. 34 kJ / 4.18 🡪 8.13 kcal.**
2. **Convert 61 kcal into kJ. 61 x 4.18 🡪 254.98 kJ**
3. **Convert 2.5 kJ into calories. 2.5 / 4.18 🡪 .59809 x 1000 🡪 598.09 cal**
4. **Convert 12 kcal into joules. 12 kcal 🡪 12000 cal x 4.18 = 50160 Joules**
5. **Convert 8000 calories into kJ. 8000 cal = 33440 Joules = 33.44 kJ**
6. **Convert 490 calories into kJ. 490 cal = 2048.2 Joules 🡪 2.048 kJ**
7. **Convert 0.0034 kcal into kJ. .0034 kcal x 4.18 = .0142 kJ**
8. **How many molecules are there in 31.8 moles of water ? OMIT**
9. **How many moles are 2.85 x 1018 atoms of Fe ? OMIT**