The heat formulae!

$$Q = mc\Delta T$$

$$T_f = \frac{mcT_i + mcT_i +}{mc + mc +}$$

$$mc\Delta T = mc\Delta T$$
(lost) (gained)

Q = Heat (J)
m = mass (kg)
c = specific heat (J/kg°K)
ΔT = change in temperature (C or K)

$\Delta T = (T_f - T_i)$

The only odd one is _____ _____, which is a number that tells how hard it is to change a substance's temperature. You have a chart on your homework sheet that lists some common ones. Water has the highest common "c" at 4180 and gold is one of the lowest at 129, so which cools faster? (_____)

A 279 g chunk of brass at 395°C is placed in 496 g of water at 26°C. What is the equilibrium temperature reached?

(Note that the equilibrium temperature is between the highest and lowest temperature)

What do these mean?

<---The first tells the quantity of heat involved in a temperature change.

<---The second allows us to predict the equilibrium temperature between objects placed in contact with each other.

<---The third is valuable when solving for an unknown specific heat or mass when initial and final temperatures are known.

42.6 g of iron at 23.9°C is allowed to come into equilibrium with some 98.2°C brass. It comes into equilibrium at 72.5°C. How much brass was there?

If I add 24800 J of heat to 863 g of ice at -26°C, what is its new temperature?