

## Answer on Question #41950, Chemistry, Organic Chemistry

### Question

How many joules of heat are lost by 3580 kg granite as it cools from 41.2°C to -12.9°C? The specific heat of granite is 0.803 J/(g•°C). Show your work.

### Answer

Heat Gain or Loss is:

$$\Delta Q = \Delta T \cdot m \cdot C_p$$

Specific Heat Capacity,  $C_p$ , for Granite is 0.803 J/g•°C. Therefore:

$$\Delta Q = (41.2 - (-12.9^\circ\text{C})) \cdot 3580000 \cdot 0.803 = 155523434 \text{ J} \approx 155.5 \text{ MJ}$$

**Answer:** Heat Change is 155.5 MJ.