1. How many calories are needed to raise the temperature of 354 grams of water from $48{ }^{\circ} \mathrm{C}$ to $88^{\circ} \mathrm{C}$ ?

Answer $\qquad$
2. How many calories does it take to melt 1,234 grams of ice at $0^{\circ} \mathrm{C}$ ?

Answer $\qquad$
3. How many calories does it take to freeze 45 grams of water starting at $34{ }^{\circ} \mathrm{C}$ ?

Answer $\qquad$
4. How many calories does it take to freeze completely vaporize/boil 125 grams of water starting at $34{ }^{0} \mathrm{C}$ ?

Answer $\qquad$
5. How many calories are required to raise the temperature of 150 g of alcohol from $24^{0} \mathrm{C}$ to $36^{0} \mathrm{C}$ ? The specific heat of alcohol is $.58 \mathrm{cal} / \mathrm{g}^{0} \mathrm{C}$.

Answer $\qquad$
6. What is the specific heat of lead if it takes 4.27 cal to raise the temperature of 10 grams of lead $14{ }^{0} \mathrm{C}$ ?

Answer $\qquad$
7. How many grams of water absorb 28 calories to change the temperature $15^{\circ} \mathrm{C}$ ?

Answer $\qquad$
8. What is the temperature change of 400 grams of water that absorbs 275 calories?
$\qquad$

