

Name: _____

Per: _____

Unit 3 Hd 4 (Honor)

Using your chart, answer the following questions. **SHOW WORK like I did in class !!!!**

Specific Heat Problems:

- 1) Find the energy needed to make 439.3g of liquid copper to go from 1065 °C to 2000 °C.

- 2) Find the mass of gold if 17,291 J is released as it goes down in temperature from 237°C to 4°C.

- 3) What is the temperature change (ΔT) if 34.7g of solid aluminum is heated using 346.7J ?

- 4) How much energy is needed to raise the temperature of 587g of water from 112°C to 173.4°C?

Heat of Fusion/ Vaporization Problems:

- 5) Find the energy needed to make 2250g of solid water melt.

- 6) Find the energy in joules needed to raise melt 139 g of Aluminum.

- 7) How much energy is needed to vaporize 587g of gold.

- 8) How much energy is released when 1234g of aluminum solidifies?

***Problems using Specific Heat, Heat of Fusion/ Heat of Vaporization problems:
These problems are more challenging and Show all your work!!!!***

One System Problems:

9) Find the energy needed to melt 165 grams of ice at 0 C°.

Draw a graph!!

10) Find the energy released when 115g of gold is cooled from 1500 C° and freezes at 1063 C°.
Draw a graph!!

11) Find the energy needed to change the temperature of salt from 100 C° to 1000 C°.
Draw a graph!!

Two System Problems:

12) How many grams of ice will melt if 564g of hot water at 70 C° is poured on it? (assume the water cools to 0 C°) ***Draw 2 graphs!!***

13) 151 g piece of copper at 500 C° is lowered into water at 21 C°. If the final temp of both is 80 C°, what is the mass of the water heated? ***Draw 2 graphs!!***

14) A 400g solid brass object at 160 C° is placed in 500g of water at 22.0 C°. The final temperature of both is 36.4 C°. Find the specific heat of the brass. ***Draw 2 graphs!!***

Show all your work!!!!