

Oct 25-7:38 AM

(22)  $\text{Fe}$  diameter = 4 cm  
density =  $\frac{7.86 \text{ g}}{\text{cm}^3}$

$T_i = 20^\circ \text{C}$   
 $C = 0.45 \text{ J/g}^\circ \text{C}$

$H_{\text{loss}} \rightarrow \text{hotter}$   
 $C = 4.18 \text{ J/g}^\circ \text{C}$

$\text{Heat gained} = MC\Delta T$   
 $(263.3)(0.45)(T_f - 20) = (9)(4.18)(50 - T_f)$

$118.49(T_f - 20) = 376.2(50 - T_f)$

$118.49T_f - 2369.8 = 18810 - 376T_f$

$+376T_f + 2369.8 = 18810 + 376T_f$

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$\frac{494.49T_f}{494.49} = \frac{2179.8}{494.49}$

$T_f = 42.83^\circ \text{C}$

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BLANKS

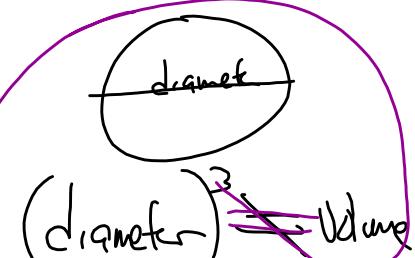
PAGE

H; T/M " V

Oct 25-8:05 AM

$$\text{diameter} = 4 \text{ cm}$$
$$\text{density} = \frac{7.86 \text{ g}}{\text{cm}^3}$$

Volume.



$$V = \frac{4}{3}\pi r^3$$

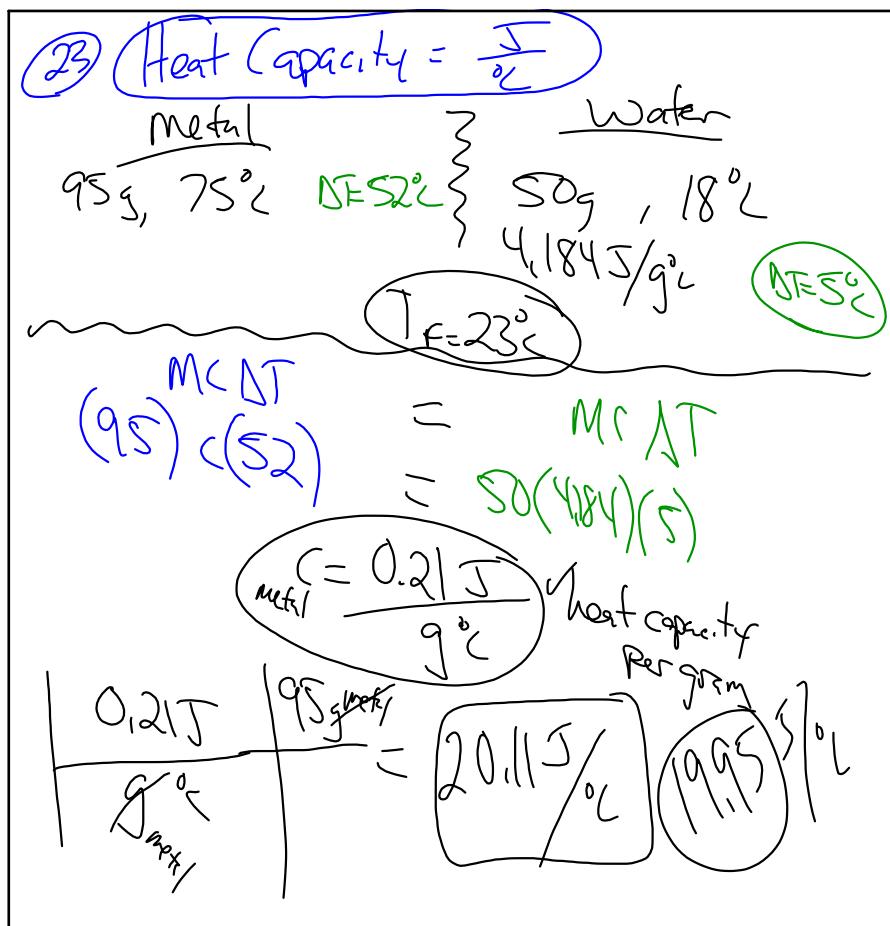
$$= \frac{4}{3}(3.14)(2^3)$$

$$V = 33.5 \text{ cm}^3$$

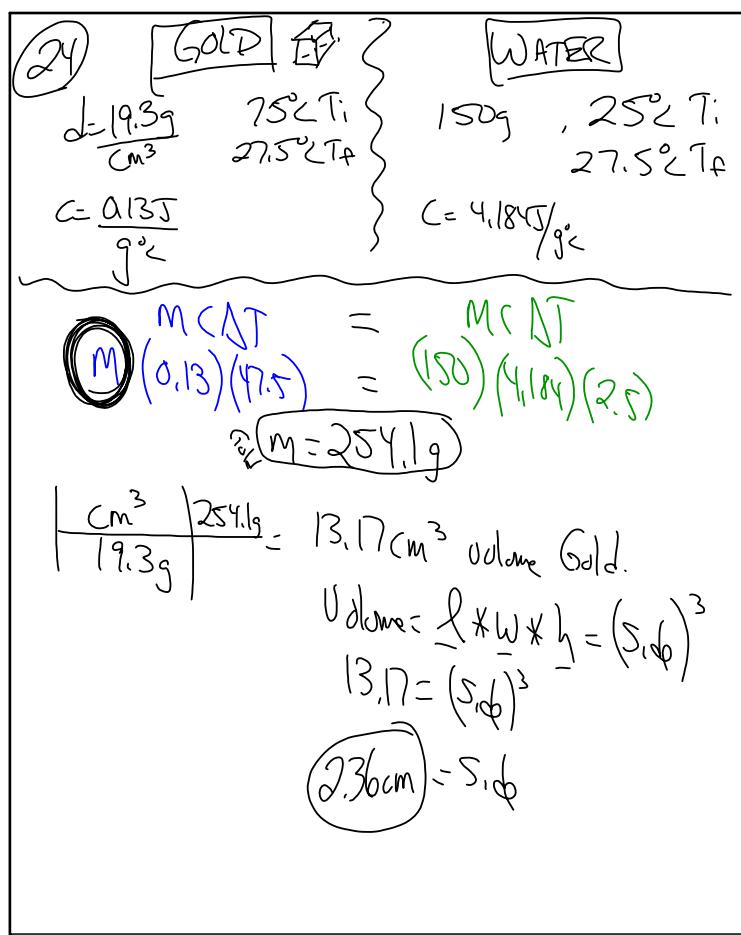
Correct Volume (ml)

$$\frac{7.86 \text{ g}}{\text{cm}^3} \times 33.5 \text{ cm}^3 = 263.31 \text{ g f.e.}$$

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Oct 25-8:24 AM