

10-28-13

TEST 2 REVIEW: GO TO

10-11-13 notes (TABULAR
REVIEW SHEET) and ADP
problems from notes

including 10-14 TO 10-25

NOTE: CORRECTION TO 10-25 NOTES.

NOTE: 3 PAGES of NOTES ALLOWED.
(6 SIDES)

$8\frac{1}{2} \times 11$

EXAM PERIOD: 2 PM \rightarrow 5:30 PM

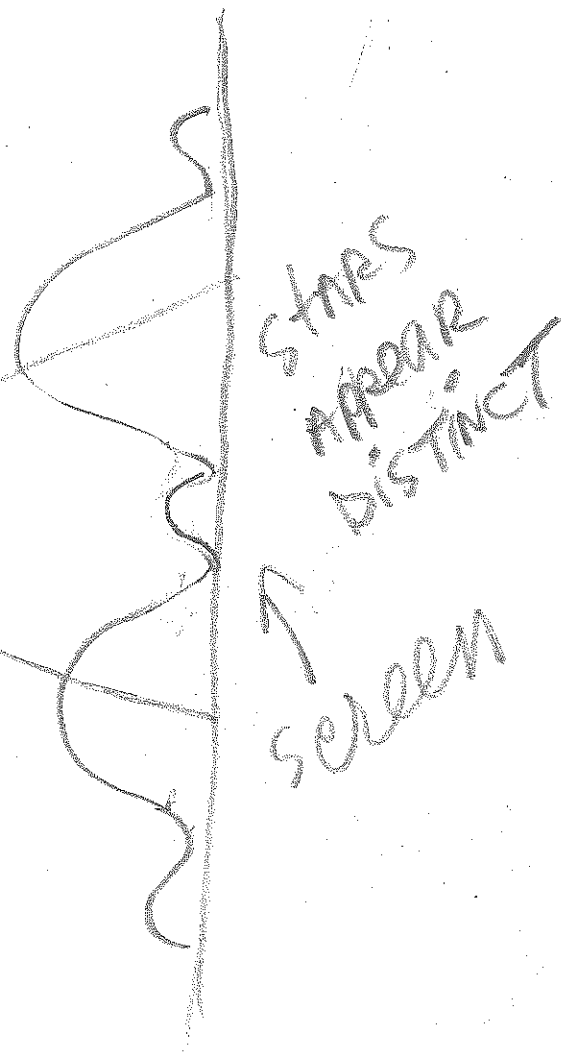
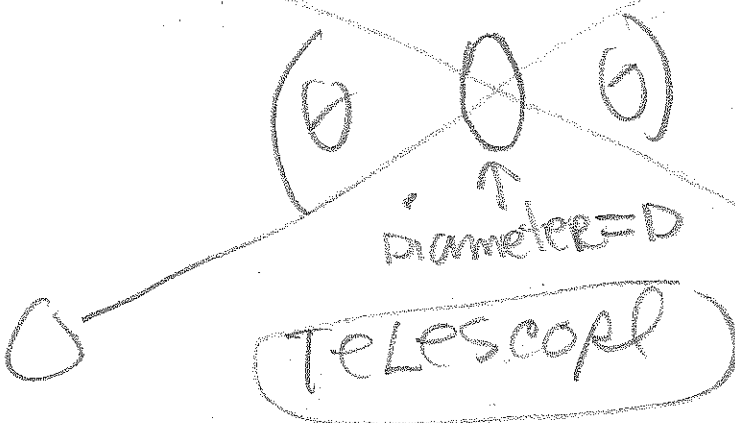
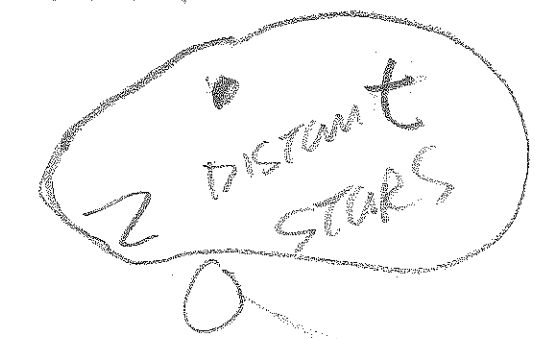
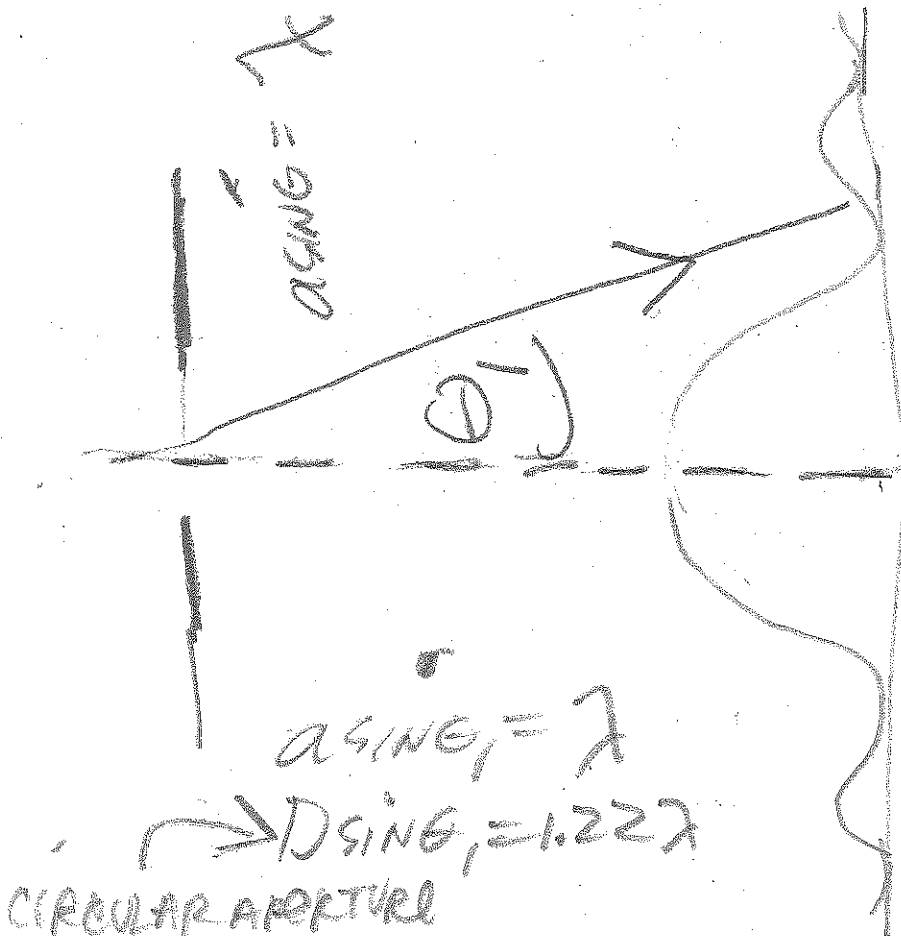
CH 36 REVIEW

CH 36

Sec 36.7

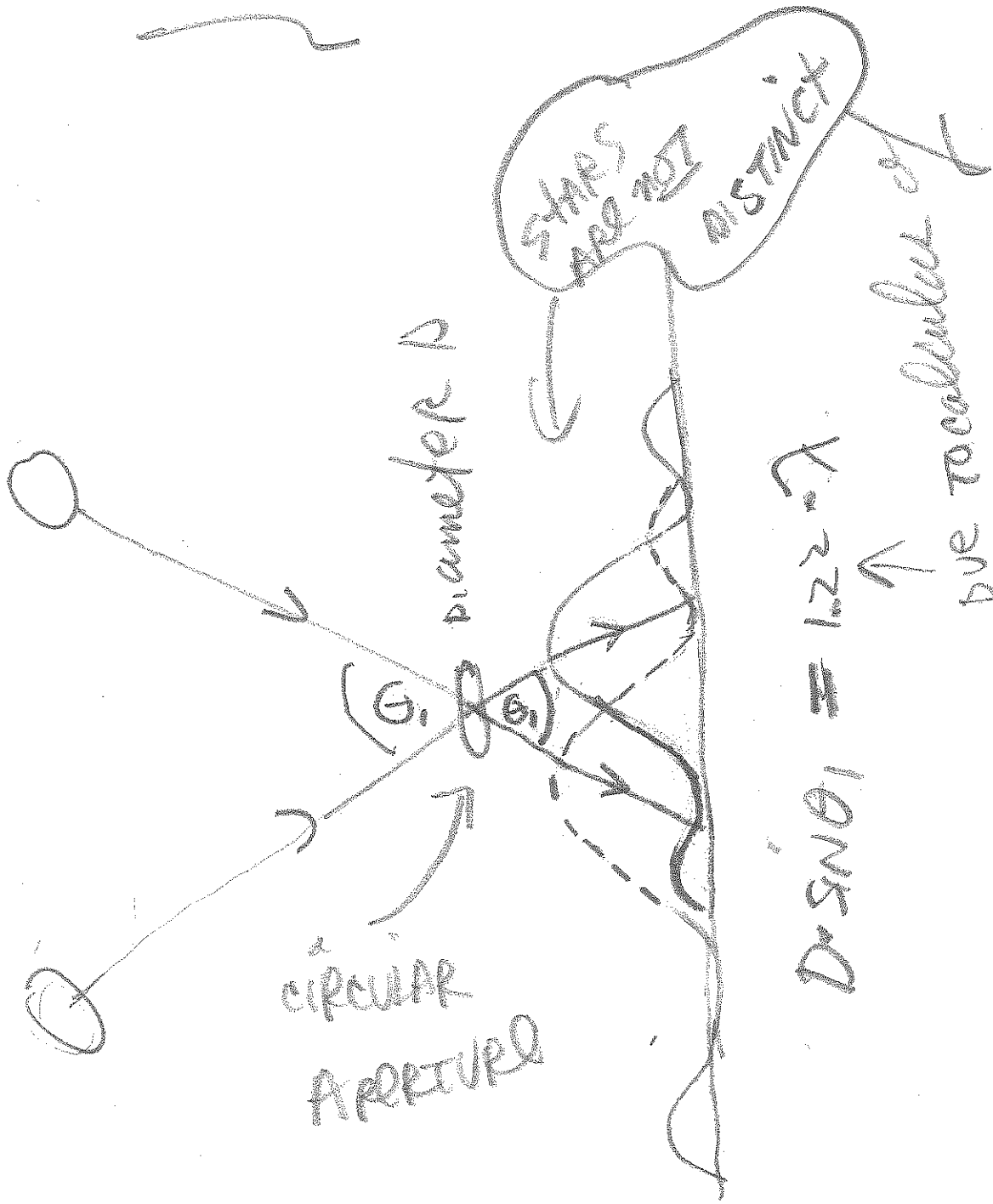
finish

SINGLE
SLIT (OR DISK)
DIFFRACTION



sec 36.7

3



$$D \cdot \sin \theta_1 = 1.22 \lambda$$

↑
due to calculation of

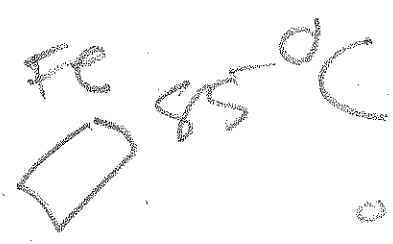
APERTURE

$$D \cdot \sin \theta_1 = 1.22 \lambda$$

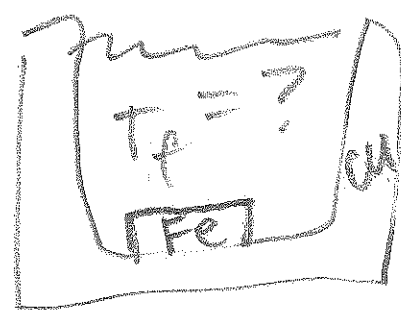
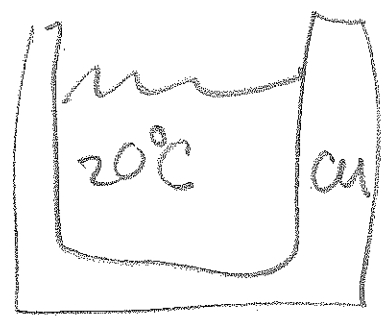
→ angle of resolution = θ_1
 ↑
 calculation of aperture

CH17,

#41



20°C < T_f < 85°C



Fe

$$|\text{Heat Lost}| = |\text{Heat gained}|$$

$$|m_{\text{Fe}} c_{\text{Fe}} \Delta T| = |\text{Heat gained}|$$

$$m_{\text{Fe}} c_{\text{Fe}} (85 - T_f) = m_{\text{Cu}} c_{\text{Cu}} (T_f - 20) + m_{\text{W}} c_{\text{W}} (T_f - 20)$$

Cu + Water

$$|\Delta T| = |T_f - 85| = 85 - T_f$$

$$\Rightarrow m_{\text{Fe}} c_{\text{Fe}} \cdot 85 - m_{\text{Fe}} c_{\text{Fe}} \cdot T_f = (m_{\text{Cu}} c_{\text{Cu}} + m_{\text{W}} c_{\text{W}}) (T_f - 20)$$

(4/1) ch 7

(5)

$$m_{Fe} \cdot C_{Fe}^{0.85} - m_{Fe} \cdot C_{Fe}^T$$

$$= (m_{Cu} C_{Cu} + m_w C_w) T_f$$

$$- (m_{Cu} C_{Cu} + m_w C_w) = 20$$

$$m_{Fe} \cdot C_{Fe}^{0.85} + (m_{Cu} C_{Cu} + m_w C_w) = 20$$

$T_f =$

$$\frac{(m_{Fe} C_{Fe}^{0.85} + (m_{Cu} C_{Cu} + m_w C_w))}{(m_{Cu} C_{Cu} + m_w C_w)}$$

$$\frac{(0.250)(470)85 + (0.5 \cdot 390 + 0.170 \cdot 4190)(20)}{(0.5 \cdot 390 + 0.170 \cdot 4190)}$$

$$\frac{[(0.25) \cdot 470 + 0.5 \cdot 390 + 0.170 \cdot 4190]}{(9987.5) + (195 + 712.3)(20)}$$

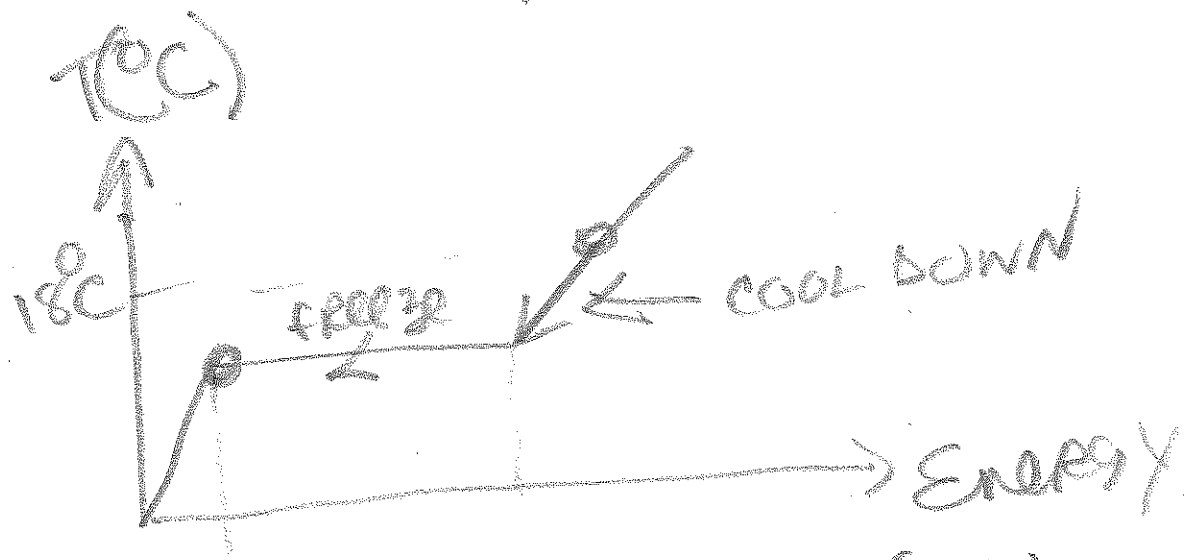
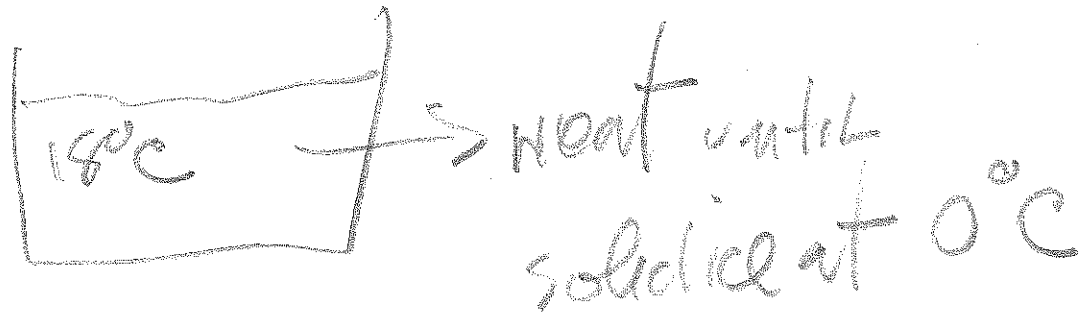
$$117.5 + 195 + 712.3$$

$$\frac{9987.5 + 18146}{1024.8}$$

$$= 27.5^\circ C$$

$$1024.8$$

(48), CH 17



$$|\text{Heat Lost}| = m_w c_w (18 - 0) + m_w L_f$$