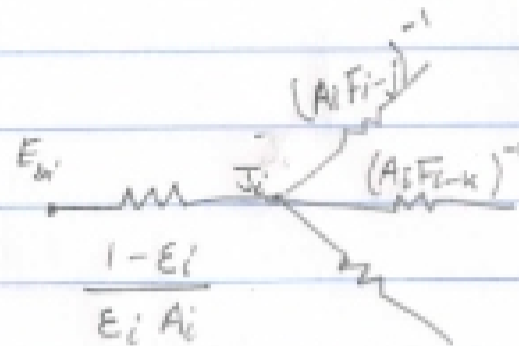
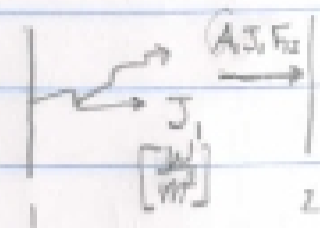


$$E_i = \epsilon_i \sigma T_i^4$$

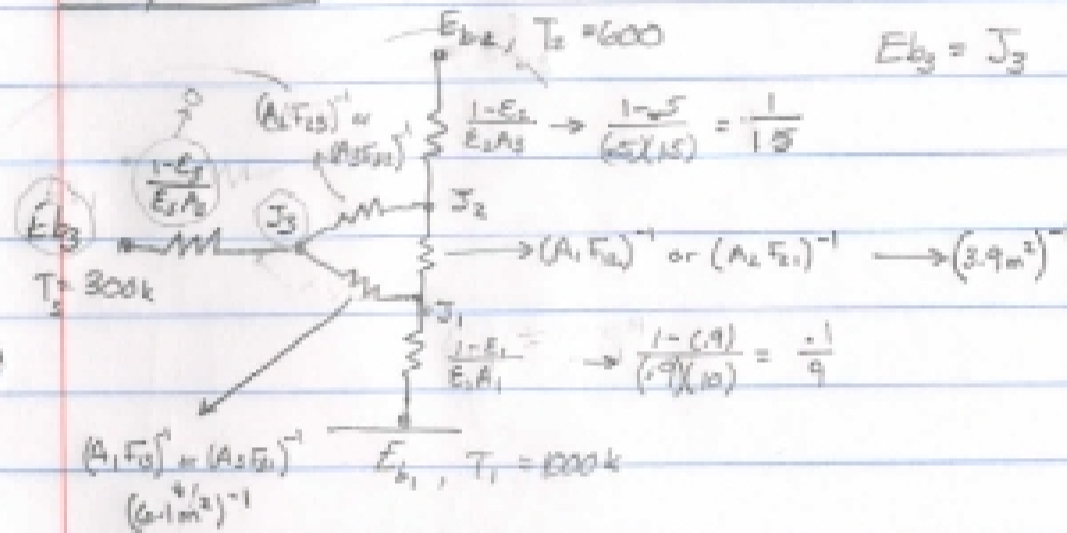
$$J = E + \rho G$$

$$E_{b,i} = \sigma T_i^4$$

$$q_i = \left( \frac{E_{b,i} - J_i}{\frac{1 - \epsilon_i}{\epsilon_i A_i}} \right) R$$



Example 13.4



$$F_{12} = F_{1A_2}$$

Figure 13.4

$$\frac{x}{L} = 1 \quad \frac{y}{L} = 10 \quad \rightarrow \quad F_{1A_2} \approx 0.39$$

$$A_1 F_{12} = 10 \text{ m}^2 (0.39) = 3.9 \text{ m}^2$$

$$F_{11} + F_{12} + F_{13} = 1 \quad \rightarrow \quad F_{13} = 0.61$$

$$A_1 F_{13} = 6.1 \text{ m}^2$$

$$F_{21} + F_{22} + F_{23} = 1 \quad \rightarrow \quad F_{22} = \frac{1}{3} \quad \rightarrow \quad 0.26 + 0.33 + F_{23} = 1 \quad \rightarrow \quad F_{23} = 0.41$$

$$F_{22} + F_{22(10/3)} = 1 \quad \rightarrow \quad F_{22} + F_{2A'} = 1$$

$$A_2 F_{2A'} = A_2 F_{A'2} \quad \rightarrow \quad F_{2A'} = \frac{10 \text{ m}^2}{15 \text{ m}^2}$$

$$F_{22} + F_{2A'} = 1 \quad \rightarrow \quad F_{A'2} = 1$$

$$A_2 F_{21} = A_1 F_{12} \quad \rightarrow \quad (15) F_{21} = (10)(0.39) \quad \rightarrow \quad F_{21} = 0.26$$

Pop quiz tomorrow over view factor factors of example 13.3 & 13.4