Weeklysubmission-5

1.

Emissivity:
To measure the ability of the surface of an object, letting out relatively stronger or weaker under the certain temperature.

Absorptivity:
How much can an object obsorb the coming radiation towards it.

Reflectivity:
How much can an object reflect the coming radiation.

View Factor:
The amount of power leaving one surface, and being received by the other.

Heat Exchange between Two Black Surfaces:
One poportion of the scattering energy from one surface, that strikes the other surface, and being totally absorbed.

Heat Exchange between Two Grey Surfaces:

Radiative Resistances:

2.

$$\dot{Q}_{12} = \frac{A\sigma(T_1^4 - T_2^4)}{\frac{1}{\epsilon_1} + \frac{1}{\epsilon_2} - 1}$$

$$= 5.67*10^{-8}\frac{(800^4 - 500^4)}{\frac{1}{0.1} + \frac{1}{0.1} - 1}$$

$$=1035.82$$

When the emissitivities decreased, the heat transfer between two parallel surface decrease.