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1. In you own words write a summary of the topics about radiative heat transfer we went through including the definitions of emissivity, absorptivity and reflectivity, the view factor, the heat exchange between two black surfaces, the heat exchange between the two gray surface and finally the definition of radiative resistances

   Considering that, all surfaces emit radiation but also receive and absorve it (or reflect it), its important to understand its intensity and emissive power.
   The radiation instensity is hardly ever uniform but its magnitude can be quantified taking a specific direction. This is called incident radiation.

   While irradiation takes a specific hemisphere to calculate the radiation flux, a diffuse surface involves considering π. But also, to calculate radiation heat transfer, the whole energy streaming away from the entire surface is taken into account.

   On the other hand its possible to measure how the ratio of radiation at a certain temperature is closer to a blackbody (a perfect emitter and absorber of radiation) through emissivity, which contemplates temperature, wavelength (spectral emissivity) and direction (directional emissivity).
   There are 3 main components regarding radiation : absorptivity , reflectivity and transmissitivity whose quantity can be found using the other remaining two.

2. Solve the last example you solved in the class (radiative heat exchange between two parallel plates) while considering the two emissivities to be 0.1, what can you conclude from the result?

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

$$= \frac{5.67x10^{-8}\left(800_1^4 - 500_2^4\right)}{\frac{1}{0.1} + \frac{1}{0.1} - 1}$$

$$= 1.035{,}81\ \frac{W}{m^2}$$

Comparing it to the last example solved in class (3.625,3W/m2 with E1 0.2 and E2 0.7) its possible to say that having an emissivity of 0.1 in both surfaces creates an almost equivalent heat exchange even though the temperatures are different.