Task 1 In you own words (which means in your 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 betweeen two black surfaces,the heat exchange between the two gray surface and finally the definition of radiative resistances.

Summary:

Radiative heat transfer = Radiation happens when the heat of an object transfers to another object with a different temperature, without concerning the material (solid, liquid or gas).

Emissivity = Emissivity of an object is the capability of its surface to emit energy, depending also on the temperature it has.

Absorptivity = Absorptivity of an objects is the capability of its surface to absorb energy.

Reflectivity = Reflectivity of an object is the capability of its surface to reflect energy, so basically the amount of energy trasmitted in the fastest fraction of time.

View factor = View factor is the proportion of the radiation that leaves surface 1 and hits surface 2.

Heat exchange between two black surfaces =

Heat exchange between two grey surfaces =

Radiative resistances = It is the resistance caused by the radiation of an object.

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

Exercise: