Example

The reflectivity of aluminum coated with lead sulfate is 0.35 for radiation at wavelengths less than 3 μm and 0.95 for radiation greater than 3 μm. (This is the **spectral** reflectivity.)

(a) Determine the average absorptivity of this surface for solar radiation. ($T = 5800$ K). Assume that the **incident radiation is well approximated by black body radiation**. (Hint: Can you relate reflectivity to the absorptivity?)
(b) Determine the absorptivity of the surface for radiation coming from sources at room temperature ($T = 300$ K). Ditto on the B-B stuff, and the hint too.
(c) Determine the emissivity of the surface at 300 K. Based on your results, would this be good stuff to use for solar collectors? Why or why not?