task3

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question1)as we calculated in the class.....R_Q=0.97 C/W

$R_t=R_{conv1}+R_{cond1}+R_p+2(R_{cond2})+R_{conv1}$=6.8 C/W

As we have this formula.....**$Q_t=(T_{\infty 1}-T_{\infty 2})/R_t$**$=(20-10)/6.8=.014W$

question1 part 2)in the first stage im going to calculate the parallel R

$1/R_p=2(1/R_{p\ plaster})+1/R_{pb}$ $=2\left(1/0.32/(0.22)(.015)\right)+1/0.32/(0.72)(.0.22)=0.5465$

$R_p=1/0.5465=1.82$ C/W

$R_T=R_{conv1}+R_{condf}+2(R_{condp})+R_p+R_{conv2}$=1/h1A1+$L_f/A_fK_f$+2($L_p/A_pK_p$)+$R_p$+1/h2A2

=1/(10)(0.25)+0.03/(0.026)(0.25)+2(0.02/(0.22)(0.25))+1.82+1/(25)(.025)=0.4+4.61+0.072+1.82+0.1=7.002 C/W

$Q_t=(T_{\infty 1}-T_{\infty 2})/R_t$ $=(20-10)/7.002=1.42$ W

question2)based on the data which is available in the table:

	wood	insulation
outside air	0.03	0.03
wood bevel(13*200mm)	0.14	0.14
polywood	0.11	0.11
urethane rigif foam(90mm)	NO	(90/25)(.098)=3.528
wood studs(90mm)	0.63	NO

gypsum board(13mm)	0.079	0.079
inside surface	0.12	0.12

R`wood=0.03+0.14+0.11+0.63+0.079+0.12=1.109 m^2C/W

R`insulation=0.03+0.14+0.11+3.528+0.079+0.12=4.007m^2C/W