

Sensor guidelines for exam in TMA4120 2023Cont

1. The exam has 8 problems, each with a max score of 10 points.
2. The problems are scored individually based on the guidelines below.
3. The scoring is based on the judgement of the sensor.
4. Every answer should be well justified/explained, and the score reduced if not.
5. Correct computations following an initial error (følgefeil), can be given some credit, but the score must be reduced according to how much the problem is changed/simplified.
6. The total score (the sum) is “project score + exam score” (giving max score 100), and then converted into grades using the following (adjusted) table:

Points	0-37.9	38-49.9	50-61.9	62-74.9	75-86.9	87-100
Grade	F	E	D	C	B	A

Problem 1:	Correctly transformed equation:	2 points
	Correctly transformed $f(t)$:	2 points
	Correct partial fraction of $Y(s)$:	2 points
	Correct inverse Laplace:	4 points
Problem 2:	Correct calculation of coefficients:	6 points
	Correct graph of the sum:	2 points
	Correct value at $x=\pi$:	2 points
Problem 3:	Correct derivation of ODEs for F and G:	3 points
	Correct solutions for F and G:	4 points
	Correct explanation of superposition:	1 points
	Correct solution of the original problem:	2 points
Problem 4:	Correct solution for u hat:	4 points
	Correct use of Parseval's identity for LHS:	3 points
	Correct bound for LHS:	3 points
Problem 5:	Correct reasoning for u being harmonic:	5 points
	Correct derivation of v with Cauchy-Riemann:	5 points
Problem 6:	Correct series for $ z < 3$:	4 points
	Correct series for $3 < z < 4$:	3 points
	Correct series for $4 < z $:	3 points
Problem 7:	Residue for $z=\pi$:	3 points
	Residue for $z=0$:	7 points
Problem 8:	Correct calculation for integral over C_R :	4 points
	Correct argument for the quarter circle using ML ineq.:	3 points
	Correct calculation of the original integral:	3 points