

Sensor guidelines for exam in TMA4120 Calculus 4K 2021h

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 multiplied by 10/8 (giving max score 100), and then converted into grades using the following table:

Points	0-39.9	40-50.9	51-62.9	63-74.9	75-86.9	87-100
Grade	F	E	D	C	B	A

Problem 1:	Correctly transformed equations:	3 points
	Correct Laplacetransform $Y(s)$:	3 points
	Correct inverse Laplace:	4 points
Problem 2:	Correctly computed coefficients:	5 points
	Correct figure:	3 points
	Correct sum:	2 points
Problem 3:	Correct Cauchy-Riemann eq'ns:	2 points
	Correct proof of $f(z)$ not analytic:	4 points
	Correct derivation of v :	4 points
Problem 4:	Correct computation of integral (i):	3 points
	Correct computation of integral (ii):	3 points
	Correct computation of integral (iii):	4 points
Problem 5:	Correct transform into complex line integral:	5 points
	Correct use of Residue theorem:	5 points
Problem 6:	Correct derivation of Laurent series:	7 points
	(max 3 points if find a (false) series for $0 < z < 1$)	
	Correct explanation why this is the only series:	3 points
Problem 7:	Correct derivation of ODEs for $X(x)$ and $Y(y)$:	2 points
	Correct derivation of BCs for $X(x)$ and $Y(y)$:	1 point
	Correct solution of $X(x)$, $Y(y)$, and u_n :	3 points
	Explains superposition/linear combination:	1 point
	Correct solution of init. cond'n:	3 points
Problem 8:	Correctly F-transformed eq'n	3 points
	Correct solution of $F[v]$	3 points
	Correct inverse transformation	4 points