Sensor guidelines for exam in TMA4120 Calculus 4K 2022 cont

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 senor.
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	0-40.9	41-52.9	53-64.9	65-76.9	77-88.9	89-100
Grade	F	E	D	C	B	A

Problem 1: Correctly transformed equations: 3 points
Correct Laplace transform Y(s): 3 points
Correct inverse Laplace: 4 points

Problem 2a): Correctly computed coefficients: 6 points
Correct figure: 4 points

Problem 2b): Correctly use Parseval to the real Fourier series: 4 points
Correct calculation/reasoning for g(x): 3 points
Correct calculation/reasoning for h(x): 3 points

Problem 2c): Correct derivation of ODEs for F(x) and G(t): 2 points
Correct derivation of BCs for F(x) and G(t): 1 point
Correct solution of F(x), G(t), and u_n: 3 points
Explains superposition/linear combination: 1 point
Correct solution of init. cond'n: 3 points

Problem 3a): Correct calculation of real and imaginary parts of f: 4 points
Correct use of Chauchy-Reimann eq.: 2 points
Correct calculation of derivatives and conclusion: 4 points

Problem 3b): Correct singularities and zeros of g(z): 4 points
Correct reasoning and conclusion of continuity: 6 points

Problem 3c): Correct Laurent series of h(z): 4 points
Correct Laurent series of $1/(z-1)^2$ for $0<|z|<1$: 3 points
Correct Laurent series of $1/(z-1)^2$ for $1<|z|$: 3 points

Problem 8: Correctly transforming to the integral of $\exp(iz)/z$ 2 points
Correct calculation/reasoning of S_ε 4 points
Correct calculation/reasoning of S_R 3 points
Correct conclusion for the original problem 1 points