MATH48181/68181: EXTREME VALUES AND FINANCIAL RISK
SEMESTER 1
QUIZ PROBLEM 1
(Deadline: 11:00am on Wednesday, 13 October 2021)

Suppose X is a random variable with probability density function

$$f(x) = \frac{1}{2}\mathrm{sech}\left(\frac{\pi x}{2}\right)$$

for $-\infty < x < \infty$. Derive the max domain of attraction of F. Please give full details.

This problem is worth 1 mark. Marking scheme: 1 mark if the answer is correct, and the derivation is correct and detailed enough; 0.5 mark if the answer is correct, and the derivation is incorrect or not detailed enough; 0.5 mark if the answer is incorrect or not given, but the derivation is correct and detailed enough; 0 mark if the answer is correct, but the derivation is not detailed enough; 0 mark if the answer is incorrect, and the derivation is not detailed enough.

Please use Blackboard to submit your answer.