UNIVERSITY OF WISCONSIN
PLATTEVILLE
DEPARTMENT OF MATHEMATICS

Problem of the Week #3

(Fall 2021)

Find all real-valued functions F with domain $\mathbb{R}$ for which

$$F(u) - F(v) \leq (u - v)^2$$

for all real numbers u and v.

[Please fully explain your answer.]

Email solutions to `kwonmi@uwplatt.edu` by 2:00pm on Wednesday, October 6, 2021.

Every week, the best solution submitted earns a $10 Platteville gift certificate; the top scorer each semester also wins a cash award. Good luck!
You can always see the Problem of the Week (and complete rules) online at:

`http://uwpmath.weebly.com/`