



PROBLEM OF THE WEEK #4
(Fall 2018)

Simplify:

$$\frac{\frac{\frac{1}{x^2} + \frac{1}{y^2}}{\frac{1}{x^2} - \frac{1}{y^2}} - \frac{\frac{1}{x^2} - \frac{1}{y^2}}{\frac{1}{x^2} + \frac{1}{y^2}}}{\left(\frac{8}{\left(\frac{x+y}{x-y} + \frac{x-y}{x+y} \right) \left(\frac{x^2}{y^2} + \frac{y^2}{x^2} - 2 \right)} \right)}$$

[Please fully explain your answer.]

Solutions should be submitted to Cinda Furry, in Gardner Hall 435, by 4:00 P.M. on Wednesday, October 10, 2018.

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/>