

Worksheet 4

Wednesday, October 16, 2019

Math 205

On Monday we tried adding a symbol ∞ to the real numbers and letting the operations $+$, $-$, \times , \div work according to their usual rules, so we got a profusion of things like $\infty + 1$ and 2∞ and

$$\frac{1}{1 + \frac{2}{3+\infty}} \qquad \frac{2}{2 + \frac{3}{1+\infty}}.$$

We worked on deciding how to order them.

1. Try to articulate a general method for deciding, given two such expressions, which is greater and which is less. Try to make your method clear and easy to follow.

-
2. In last week's number system, we had many decisions to make, like what to do about $\infty - \infty$ and ∞/∞ , and every decision had its own problems (and its own advantages). Do any problems arise in this week's number system?