

MATH 844: HOMEWORK 1, DUE SEP 20.

1. $(a, b, c, d) = (4, 9, 36, 49)$ has the property that $b + c = d - a$ and $\sqrt{b} + \sqrt{c} = \sqrt{a} + \sqrt{d}$. An applied math colleague of mine once asked me to find all 4-tuples of integers (a, b, c, d) with that property. Find a rational parametrization of the solution and hence answer my colleague's question.