

Homework 6

1. (Mad Hatter 11-12 2005) How many real solutions are there to the equation $\sqrt{x^2 + 1} + \sqrt{x} = 1$? (Find all solutions.)
2. (Mad Hatter 11-12 2006) Solve for x : $\log_2 x + \log_3 x = 3 + \log_2 3 + \log_3 4$.
3. (Mad Hatter 11-12 2003) Solve for x : $\sqrt{x^2 - x - 12} < x$.
4. (Mad Hatter 11-12 2003) Solve for x : $\log_{x^2-3} 729 > 3$.