

m3hprob8.tex

M3H PROBLEMS 8. 6.12.2013

Q1 (*Fundamental Theorem of Arithmetic, FTA*).

Every integer $n \geq 2$ can be written uniquely (to within order) as a product of prime factors.

Q2 (*Basel problem: Leonhard Euler (1707-1783) in 1735*).

$$\zeta(2) := \sum_{n=1}^{\infty} 1/n^2 = \pi^2/6.$$

Euler used real methods. You may find it easier to use (i) Fourier Analysis, or (ii) Complex Analysis (details on my M2P3 website).

NHB