

# MATH453M Homework Week 11

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Question 1 (a) Write  $n = 970$  as a product of irreducibles in  $\mathbb{Z}[i]$ .

(b) Use (a) to find all solutions to

$$x^2 + y^2 = 970 \quad \text{where } x, y \in \mathbb{N} \text{ and } x \geq y.$$

Shifrin Section 6.1:

Questions 0 (a joke), 1 (a, b & g),  
4 and 12.

Due Wednesday 30th November.