



QUESTION WORKBOOK

The Euclidean algorithm and Bezout's identity

Further Pure 2 · Year FM

6 questions · 21 marks

NAVY SCREEN EDITION

SECTION A · Warm-up

A1 Use the Euclidean algorithm to find the highest common factor of 1001 and 357.

[3]

A2 Hence express that highest common factor in the form $1001x + 357y$.

[3]

SECTION B · Standard

B1 Find the highest common factor of 2024 and 748, and write it in Bezout form.

[4]

B2 Show that 391 and 299 are not coprime, and state their highest common factor.

[3]

B3 Use Bezout's identity to find the multiplicative inverse of 11 modulo 26.

[4]

SECTION C · Stretch

C1 Find all integer solutions of $12x + 45y = 6$.

[4]