

3 5

7 3

Find all prime numbers p such that this matrix (mod p) is not invertible.

Find the determinant of the matrix, ie:

$$(3)(3)-(5)(7) = 9-35 = -26$$

For the determinant to equal 0 (the matrix is not invertible)

$$-26 \equiv (0) \pmod{p}$$

Thus $p = 2, 13$