

## ALGEBRAIC CURVES W4045

### 1. HOMEWORK, WEEK 1, DUE SEPTEMBER 15

1. (Linear diophantine equations) Let  $a, b, c \in \mathbb{Z}$ . Give necessary and sufficient conditions for the existence of a solution to the diophantine equation

$$ax + by = c$$

with  $x, y \in \mathbb{Z}$ .

2. Exercises 1.1, 1.2, and 1.3 in the Miles Reid book.