

first name

last name

id#

(2 + 3) + (2 + 3) + (3 + 2) marks

50 min

closed book

no devices

3 pages

page 1

1. [3 marks] Prove that the game $\{1 \mid 1\}$ equals the game $1 + *$.

2. [6 marks] For each of these games, give the canonical form. If your answer is correct, you get full marks. If your answer is wrong, we will look at your explanation to assign part marks.

a) $\{0 \mid \}$

b) $\{0 \mid 0\}$

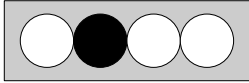
c) $\{0 \mid -1\}$

d) $\{0 \mid 1\}$

e) $\{0 \mid *\}$

f) $\{0 \mid 0, *\}$

3. [3 marks] Prove that canonical form of this clobber game is $\uparrow^* = \{0, *|0\}$.



4. [3 marks] Find the canonical form of this clobber game (diagram shows the canonical moves). Prove your answer.

