

Game Theory, PhD in Economics and Management, 2005/06  
Exercises (by Fragnelli), sheet no. 4, Tuesday, December 6, 2005

**Esercise 1**

Given the TU game  $G = (N, v)$ , where  $N = \{1, 2, 3, 4\}$  and  $v$  is defined by:

$$v(S) = \begin{cases} 1 & \text{if } \text{card}(S) = 1 \\ 4 & \text{if } \text{card}(S) = 2 \\ 5 & \text{if } \text{card}(S) = 3 \\ 8 & \text{if } S = N \end{cases}$$

1. Compute  $\phi_i(v)$ ,  $i \in N$ .
2. Check that  $\phi(v) \in C(v)$ .
3. Check that  $\phi(v)$  is the unique element in  $C(v)$ .