


Algorithmics	Student information	Date	Number of session
	UO: 301949	13/03/2025	4
	Surname: Sánchez Menéndez	 Escuela de Ingeniería Informática Universidad de Oviedo	
	Name: Adrián		



## Activity 1. Graph Colouring

The time complexity of the algorithm is  $O(n \cdot k \cdot (k+1))$  where  $n$  is the number of nodes and  $k$  the maximum number of neighbors. As  $k$  is constant, the complexity is closer to linear than to a cubic complexity.

n	t Colouring (ms)
8	LoR
16	0.9
32	1.64
64	3.00
128	5.53
256	11.73
512	23.9
1024	47.1
2048	95.5
4096	199.5
8192	443.9
16384	1049.1
32768	2550.4
65536	6873.2