

Solutions to CS/MCS 401 Week 8-9 Exercises P and Q (Spring 2008)

Exercise P

i	j,p											r		
		36	83	75	48	14	71	64	22	91	69	58	88	72
	i,p	j											r	
		36	83	75	48	14	71	64	22	91	69	58	88	72
	i,p		j										r	
		36	83	75	48	14	71	64	22	91	69	58	88	72
	i,p			j									r	r
		36	83	75	48	14	71	64	22	91	69	58	88	72
	p		i			j								r
		36	48	75	83	14	71	64	22	91	69	58	88	72
	p			i			j							r
		36	48	14	83	75	71	64	22	91	69	58	88	72
	p				i			j						r
		36	48	14	71	75	83	64	22	91	69	58	88	72
	p					i			j					r
		36	48	14	71	64	83	75	22	91	69	58	88	72
	p						i			j				r
		36	48	14	71	64	22	75	83	91	69	58	88	72
	p							i			j			r
		36	48	14	71	64	22	83	75	91	69	58	88	72
	p								i			j		r
		36	48	14	71	64	22	69	75	91	83	58	88	72
	p									i			j	r
		36	48	14	71	64	22	69	58	91	83	75	88	72
	p										i			j,r
		36	48	14	71	64	22	69	58	91	83	75	88	72
	p											i		j,r
		36	48	14	71	64	22	69	58	72	83	75	88	91

Exercise Q Elements that are shaded will be exchanged in the next step.

left												right	
	36	83	75	48	14	71	64	22	91	69	58	88	72

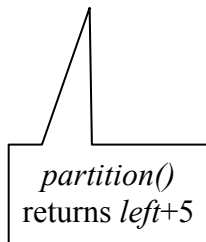
left	lo											right	
	64	83	75	48	14	71	36	22	91	69	58	88	72
												hi ← hi ← hi	

left		lo										right	
	64	58	75	48	14	71	36	22	91	69	83	88	72
												hi ← hi ← hi	

left												right	
	64	58	22	48	14	71	36	75	91	69	83	88	72
												lo → lo → lo	

left												right	
	64	58	22	48	14	36	71	75	91	69	83	88	72
												hi	

left												right	
	36	58	22	48	14	64	71	75	91	69	83	88	72



partition()
 returns *left+5*