

No Overhead Time

First Come First Serve

READY P1 P2 P3 P4	1-15	1-4		1-4	1-37		1-37	1-30	
Proc	P1	P2	NONE	P3	P4	NONE	P4	P2	NONE
Start	0	15	19	27	31	68	168	205	235
End	15	19	27	31	68	168	205	235	285
WAIT P1 P2 P3 P4		415	415 169	415 169	415 169 431	415 169 431 168	415 169 431	415 431 305	415 285 431 305

READY P1 P2 P3 P4	1-90			1-18		3-15 1-15	2-15	1-15	
Proc	P2	P4	NONE	P1	P3	P2	P4	P1	P3
Start	285	375	412	415	433	1243	1258	1295	1310
End	375	412	415	433	1243	1258	1295	1310	1686
WAIT P1 P2 P3 P4	415	415 450	415 450	450 431	633 450 512	1273	1273	1395	1410 1395

READY P1 P2 P3 P4	2-15	1-15		2-25	1-25			1-240	
Proc	P4	P1	P3	P4	P1	NONE	P4	P1	
Start	1686	1723	1738	2390	2427	2452	2527	2564	
End	1723	1738	2390	2427	2452	2527	2564	2804	
WAIT P1 P2 P3 P4			2138			2552	2552		
	1731	1731	1823		2527	2527			

cpu waste (no job in CPU) = 8 + 100 + 50 + 3 + 75 = 236

p1 arrival = 0 end = 2804 ta = 2804

p2 arrival = 12 end = 1258 ta = 1246

p3 arrival = 27 end = 2390 ta = 2363

p4 arrival = 28 end = 2564 ta = 2836

No Overhead Time

Shortest Job First

READY P1 P2 P3 P4	1-15	1-4		1-4	1-37		1-37	1-30	
Proc	p1	p2	none	p3	p4	none	p4	p2	none
Start	0	15	19	27	31	68	168	205	235
End	15	19	27	31	68	168	205	235	285
WAIT P1 P2 P3 P4		415	415 169	415 169	415 169 431	415 169 431 168	415 169 431	415 431 305	415 285 431 305

READY P1 P2 P3 P4	1-90			1-18		2-15 1-15	1-15		
		1-37			1-810	3-37	2-376 1-37	1-376	
Proc	p2	p4	none	p1	p3	p2	p1	p4	p3
Start	285	375	412	415	433	1243	1258	1273	1310
End	375	412	415	433	1243	1258	1273	1310	1686
WAIT P1 P2 P3 P4	415	415 450	415 450	450 431	633 450 512		1373	1373	1410

READY P1 P2 P3 P4	1-15			1-25			1-240		
			1-652						
Proc	p1	p4	p3	p1	p4	none	p1	p4	
Start	1686	1701	1738	2390	2415	2452	2515	2755	
End	1701	1738	2390	2415	2452	2515	2755	2792	
WAIT P1 P2 P3 P4		2101	2101	2515	2515				

cpu waste (no job in CPU) = 8 + 100 + 50 + 3 + 63 = 224

p1 arrival = 0 end = 2755 ta = 2755

p2 arrival = 12 end = 1258 ta = 1246

p3 arrival = 27 end = 2390 ta = 2363

p4 arrival = 28 end = 2792 ta = 2764

No Overhead Time

Shortest Remaining Time Next

READY									
P1	1-15	1-3	1-4		1-4	1-3			
P2		2-4				2-37	1-37		
P3									1-37
P4									
Proc	p1	p1	p2	none	p3	p3	p4	none	p4
Start	0	12	15	19	27	28	31	68	168
End		12	15	19	27	31	68	168	169
WAIT									
P1			415	415	415	415	415	415	415
P2				169	169	169	169	169	169
P3							431	431	431
P4								168	

READY									
P1				1-90	1-4			1-15	2-18
P2	1-30								1-14
P3									
P4	2-36	1-36			2-37	1-37			
Proc	p2	p4	none	p2	p2	p4	none	p2	p2
Start	169	199	235	249	335	339	376	414	415
End	199	235	249	335	339	376	414	415	429
WAIT									
P1	415	415	415	415	415	415	415	415	
P2		249	249			414	414		
P3	431	431	431	431	431	431	431	431	431
P4			335	335			476	476	476

READY									
P1	1-18	1-16					2-15	1-15	
P2									
P3		2-810	1-810	2-781	1-781	2-681	3-681	2-681	1-681
P4				1-37		1-37	1-3		
Proc	p1	p1	p3	p4	p3	p4	p4	p1	p3
Start	429	431	447	476	513	613	647	650	665
End	431	447	476	513	613	647	650	665	750
WAIT									
P1			647	647	647	647			765
P2									
P3	431								
P4	476	476	476		613			750	750

No Overhead Time

READY									
P1		1-15					1-25		2-240
P2									
P3	2-596	3-596	2-596	1-596	2-496	1-496	2-255	1-255	1-155
P4	1-37	2-22	1-22		1-37				
Proc	p4	p1	p4	p3	p4	p3	p1	p3	p3
Start	750	765	780	802	902	939	1180	1205	1305
End	765	780	802	902	939	1180	1205	1305	1460
WAIT									
P1	765		1180	1180	1180	1180		1305	
P2									
P3									
P4				902					

READY									
P1	1-240	1-210							
P2									
P3		2-376	1-376		1-652				
P4									
Proc	p1	p1	p3	none	p3				
Start	1460	1490	1700	2076	2121				
End	1490	1700	2076	2121	2773				
WAIT									
P1									
P2									
P3	1490			2121					
P4									

cpu waste (no job in CPU) = 8 + 100 + 14 + 38 + 45 = 205

p1 arrival = 0 end = 1700 ta = 1700

p2 arrival = 12 end = 429 ta = 417

p3 arrival = 27 end = 2773 ta = 2746

p4 arrival = 28 end = 939 ta = 911

No Overhead Time

Round Robin 50

READY P1 P2 P3 P4	1-15	1-4		1-4	1-37		1-37	1-30	
Proc	p1	p2	none	p3	p4	none	p4	p2	none
Start	0	15	19	27	31	68	168	205	235
End	15	19	27	31	68	168	205	235	285
WAIT P1 P2 P3 P4		415	415 169	415 169	415 169 431	415 169 431 168	415 169 431	415 431 305	415 285 431 305

READY P1 P2 P3 P4	1-90	2-40	1-40		1-18		1-810	2-760	2-15	1-15
		1-37					1-37	1-760	2-710	
Proc	p2	p4	p2	none	p1	p3	p4	p3	p2	
Start	285	335	372	412	415	433	483	520	570	570
End	335	372	412	415	433	483	520	570	585	585
WAIT P1 P2 P3 P4	415	415	415	415 487	487 431	633 487	633 487	633	633	633
	431 305	431	431 472	431 472	431 472	431 472	431 472	431 620	431 620	431 620

READY P1 P2 P3 P4		2-15	1-15		???	3-15	2-15	1-15	
	1-710	3-660	2-660	1-660	1-610	2-560	1-560	2-510	1-510
		1-37				1-37			
Proc	p3	p4	p1	p3	p3	p4	p3	p1	p3
Start	585	635	672	687	737	787	824	874	889
End	635	672	687	737	787	824	874	889	939
WAIT P1 P2 P3 P4	633			787	787				1289
	620		772	772	772		924	924	924

No Overhead Time

READY P1 P2 P3 P4									1-25
	2-460	1-460	1-410	1-360	1-310	1-260	1-210	1-160	2-110
	1-37								
Proc	p4	p3	p3	p3	p3	p3	p3	p3	p1
Start	939	976	1026	1076	1126	1176	1226	1276	1326
End	976	1026	1076	1126	1176	1226	1276	1326	1351
WAIT P1 P2 P3 P4									
	1289	1289	1289	1289	1289	1289	1289	1289	

READY P1 P2 P3 P4		???	2-240	1-240	2-190	1-190	2-140	1-140	2-90
	1-110	1-60	1-10		1-376	2-326	1-326	2-276	1-276
Proc	p3	p3	p3	p1	p3	p1	p3	p1	p3
Start	1351	1401	1451	1461	1511	1561	1611	1661	1711
End	1401	1451	1461	1511	1561	1611	1661	1711	1761
WAIT P1 P2 P3 P4	1451	1451							
				1491					

READY P1 P2 P3 P4	1-90	2-40	1-40						
	2-226	1-226	2-176	1-176	1-126	1-76	1-26		1-652
Proc	p1	p3	p1	p3	p3	p3	p3	none	p3
Start	1761	1811	1861	1901	1951	2001	2051	2077	2122
End	1811	1861	1901	1951	2001	2051	2077	2122	2172
WAIT P1 P2 P3 P4									
								2122	

No Overhead Time

READY									
P1									
P2									
P3	1-602	1-552	1-502	1-452	1-402	1-352	1-302	1-252	1-202
P4									
Proc	p3	p3	p3	p3	p3	p3	p3	p3	p3
Start	2172	2222	2272	2322	2372	2422	2472	2522	2572
End	2222	2272	2322	2372	2422	2472	2522	2572	2622
WAIT									
P1									
P2									
P3									
P4									

READY									
P1									
P2									
P3	1-152	1-102	1-52	1-2					
P4									
Proc	p3	p3	p3	p3					
Start	2622	2672	2722	2772					
End	2672	2722	2772	2774					
WAIT									
P1									
P2									
P3									
P4									

cpu waste (no job in CPU) = 8 + 100 + 50 + 3 + 45 = 206

p1 arrival = 0 end = 1901 ta = 1901

p2 arrival = 12 end = 585 ta = 573

p3 arrival = 27 end = 2774 ta = 2747

p4 arrival = 28 end = 976 ta = 948

No Overhead Time

Round Robin 100

READY P1 P2 P3 P4	1-15	1-4		1-4	1-37		1-37	1-30	
Proc	p1	p2	none	p3	p4	none	p4	p2	none
Start	0	15	19	27	31	68	168	205	235
End	15	19	27	31	68	168	205	235	285
WAIT P1 P2 P3 P4		415	415 169	415 169	415 169 431	415 169 431 168	415 169 431	415 431 305	415 285 431 305

READY P1 P2 P3 P4	1-90			1-18		1-15 3-710 2-37			1-15
Proc	p2	p4	none	p1	p3	p2	p4	p3	p1
Start	285	375	412	415	433	533	548	585	685
End	375	412	415	433	533	548	585	685	700
WAIT P1 P2 P3 P4	415	415 450	415 450 431	450 431 512	633 450 512	633	633	633 685	

READY P1 P2 P3 P4			1-15						
Proc	p4	p3	p1	p4	p3	p4	p3	p3	p3
Start	700	737	837	852	889	989	1026	1126	1226
End	737	837	852	889	989	1026	1126	1226	1326
WAIT P1 P2 P3 P4	800	800		1252	1252	1252	1252	1252	1252

No Overhead Time

READY		???							
P1	1-25		2-240	1-240					
P2									
P3	2-110	1-110	1-10		1-376	1-276	1-176	1-76	
P4									
Proc	p1	p3	p3	p1	p3	p3	p3	p3	none
Start	1326	1351	1451	1461	1701	1801	1901	2001	2077
End	1351	1451	1461	1701	1801	1901	2001	2077	2122
WAIT									
P1		1451							
P2									
P3				1491					2122
P4									

READY									
P1									
P2									
P3	1-652	1-552	1-452	1-352	1-252	1-152	1-52		
P4									
Proc	p3	p3	p3	p3	p3	p3	p3		
Start	2122	2222	2322	2422	2522	2622	2722		
End	2222	2322	2422	2522	2622	2722	2774		
WAIT									
P1									
P2									
P3									
P4									

cpu waste (no job in CPU) = 8 + 100 + 50 + 3 + 45 = 206

p1 arrival = 0 end = 1701 ta = 1701
p2 arrival = 12 end = 548 ta = 536
p3 arrival = 27 end = 2774 ta = 2747
p4 arrival = 28 end = 1026 ta = 998