HILILLO 0

et.	instrucción		resultado	codificada	HILO
	DADDI	R4 ,R0 ,#4	R4 = 4	8 0 4 4	
	DADDI	R1, R0, #1	R1 = 1	8 0 1 1	
	DADDI	R20, R0, #20	R20 = 20	8 0 20 20	
	DADDI	R2, R0, #112	R2 = 112	8 0 2 112	
Allá	DADDI	R5, R0, #4	R5 = 4	8 0 5 4	
AHÍ	DSUB	R5, R5, R1	R5 -= 1	34 5 1 5	
	BNEZ	R5, **AHI**	Ejecuta el salto 4 veces	5 5 0 -2	
	SW	R1, 0(R2)	M[R2] = 1	43 2 1 0	
	SW	R1, 4(R2)	M[R2+4] = 1	43 2 1 4	
	SW	R1, 8(R2)	M[R2+8] = 1	43 2 1 8	**0**
	SW	R1, 12(R2)	M[R2+12] = 1	43 2 1 12	
	DSUB	R20, R20, R4	R20 -= 4	34 20 4 20	
	DADDI	R2, R2, #16	R2 +=16	8 2 2 16	
	BNEZ	R20, **Allá**	Ejecuta el salto 4 veces	5 20 0 -10	
	DADDI	R31, R0, #99	R31= 99	8 0 31 99	
	SW	R31, 368(R0)	M[368] = 99	43 0 31 368	
	LW	R13, 92(R0)	R13= M [92] = 0 ó 55	35 0 13 92	
	LW	R12 , 0 (R0)	R12 = M [0] = 0 ó 88	35 0 12 0	
	LW	R14, 28(R0)	R14 = M[28] = 0 ó 44	35 0 14 28	
	LW	R15, 364 (R0)	R15 = M[364] = 0 ó 33	35 0 15 364	
	FIN		FINALIZA	63 0 0 0	

Resultados en registros

R0	0
R1	1
R2	192
R4	4
R5	0
R12	0 ó 88
R13	0 ó 55
R14	0 ó 44
R15	0 ó 33
R20	0
R31	99

HILILLO 1

	DADDI	R4 ,R0 ,#4	R4 = 4	8 0 4 4		R0	0
	DADDI	R2, R0, #2	R2 = 2	8 0 2 2		R2	2
	DADDI	R28, R0, #28	R28 = 28	8 0 28 28		R4	4
	DADDI	R16, R0, #160	R16= 160	8 0 16 160		R5	0
ALLÁ	DADDI	R5, R0, #3	R5 = 3	8 0 5 3		R11	0 ó 99
	SW	R2, 0(R16)	M[R16] =2	43 16 2 0		R13	0 ó 55
	SW	R2, 4(R16)	M[R16+4] = 2	43 16 2 4		R14	0 ó 44
	SW	R2, 8(R16)	M[R16+8] = 2	43 16 2 8		R15	0 ó 33
	SW	R2, 12(R16)	M[R16+12] = 2	43 16 2 12		R16	272
	DSUB	R28, R28, R4	R28 -= 4	34 28 4 28		R28	0
	DADDI	R16, R16, #16	R16 +=16	8 16 16 16		R31	88
AQUÍ	DADDI	R5, R5, #-1	R5 -= 1	8 5 5 -1	**1**		
	BNEZ	R5, **AQUÍ**	Ejecuta el salto 3 veces	5 5 0 -2			
	BNEZ	R28, **ALLÁ**	Ejecuta el salto 6 veces	5 28 0 -10			
	DADDI	R31, R0, #88	R31= 88	8 0 31 88			
	SW	R31,0(R0)	M[0] = 88	43 0 31 0			
	LW	R13, 92(R0)	R13= M [92] = 0 ó 55	35 0 13 92			
	LW	R11 , 368 (R0)	R11 = M [368] = 0 ó 99	35 0 11 368			
	LW	R14, 28(R0)	R14 = M[28] = 0 ó 44	35 0 14 28			
	LW	R15, 364 (R0)	R15 = M[364] = 0 ó 33	35 0 15 364			
	FIN		FINALIZA	63 0 0 0			

HILILLO 2

	DADDI	R4 ,R0 ,#4	R4 = 4	8 0 4 4		R0	0
	DADDI	R3, R0, #3	R3= 3	8 0 3 3		R3	3
	DADDI	R28, R0, #28	R28 = 28	8 0 28 28		R4	4
	DADDI	R24, R0, #240	R24 = 240	8 0 24 240		R5	0
ALLÍ	DADDI	R5, R0, #4	R5 = 4	8 0 5 4		R11	0 ó 99
	SW	R3, 0(R24)	M[R24] = 3	43 24 3 0		R12	0 ó 88
	SW	R3, 4(R24)	M[R24+4] = 3	43 24 3 4		R14	0 ó 44
ACÁ	DADDI	R5, R5, #-1	R5 -= 1	8 5 5 -1		R15	0 ó 33
	BNEZ	R5, **ACÁ**	Ejecuta el salto mil veces	5 5 0 -2		R24	352
	SW	R3, 8(R24)	M[R24+8] = 3	43 24 3 8		R28	0
	SW	R3, 12(R24)	M[R24 + 12] = 3	43 24 3 12		R31	55
	DSUB	R28, R28, R4	R28 -= 4	34 28 4 28	**2**		
	DADDI	R24, R24, #16	R24 +=16	8 24 24 16			
	BNEZ	R28, **ALLÍ**	Ejecuta el salto 6 veces- el cuerpo del loop 7 veces	5 28 0 -10			
	DADDI	R31, R0, #55	R31= 55	8 0 31 55			
	SW	R31, 92(R0)	M[92] = 55	43 0 31 92			
	LW	R11, 368 (R0)	R11 = M [368] = 0 ó 99	35 0 11 368			
	LW	R12 , 0 (R0)	R12 = M [0] = 0 ó 88	35 0 12 0			
	LW	R14, 28(R0)	R14 = M[28] = 0 ó 44	35 0 14 28			
	LW	R15, 364 (R0)	R15 = M[364] = 0 ó 33	35 0 15 364			
	FIN		FINALIZA	63 0 0 0			

HILILLO 3

	DADDI	R4 ,R0, #4	R4 = 4	8 0 4 4		R0	0
	DADDI	R3, R0, #0	R3 = 0	8 0 3 0		R3	0, 2, 4, 5 ó 6
	DSUB	R30, R30, R30	R30 = 0	34 30 30 30		R4	4
	DSUB	R10, R10, R10	R10 = 0	34 10 10 10		R5	0, 2 ó 3
	DADDI	R25, R0, #256	R25 = 256	8 0 25 256		R6	0, 2 ó 3
	DADDI	R8, R0, #8	R8 = 8	8 0 8 8		R8	0
ETI	LW	R5, 0(R25)	R5 = M[R25] = 0, 2 ó 3	35 25 5 0		R10	0, 2, 4, 5 ó 6
	LW	R6, 4 (R25)	R6 = M[R25 + 4] = 0, 2 ó 3	35 25 6 4		R11	0 ó 99
	DADD	R3, R5, R6	R3 = R5 + R6 = 0, 2, 4, 5, 6	32 5 6 3		R12	0 ó 88
	DADD	R30, R30, R3	R30 += R3	32 30 3 30		R13	0 ó 55
	SW	R4 , 0(R25)	M[R25] = 4	43 25 4 0		R15	0 ó 33
	SW	R4, 4 (R25)	M[R25 + 4] = 4	43 25 4 4		R25	288
	LW	R5, 8(R25)	R5 = M[R25] = 0, 2 ó 3	35 25 5 8		R30	+R3 + R10 2 VECES
	LW	R6, 12(R25)	R6 = M[R25 + 4] = 0, 2 ó 3	35 25 6 12	**3**	R31	44
	DADD	R10, R5, R6	R10 = R5 + R6 = 0, 2, 4, 5, 6	32 5 6 10			
	SW	R4 , 8(R25)	M[R25 +8] = 4	43 25 4 8			
	SW	R4, 12(R25)	M[R25 + 12] = 4	43 25 4 12			
	DADD	R30, R30, R10	R30 += R10	32 30 10 30			
	DADDI	R8, R8, # -4	R8 -= 4	8 8 8 -4			
	DADDI	R25, R25, # 16	R25 += 16	8 25 25 16			
	BNEZ	R8, **ETI**	Salta 1 vez (2 en total)	5 8 0 -15			
	SW	R30, 20(R0)	M[20] = R30	43 0 30 20			
	BEQZ	R8, **END**	SALTA	4 8 0 1			
	SW	R25, 24 (R0)	NO SE DEBE EJECUTAR	43 0 25 24			
END	DADDI	R31, R0, #44	R31 = 44	8 0 31 44			
	SW	R31, 28 (R0)	M[28] = 44	43 0 31 28			
	LW	R11, 368 (R0)	R11 = M [368] = 0 ó 99	35 0 11 368			
	LW	R12 , 0 (R0)	R12 = M [0] = 0 ó 88	35 0 12 0			
	LW	R13, 92(R0)	R13= M [92] = 0 ó 55	35 0 13 92			
	LW	R15, 364 (R0)	R15 = M[364] = 0 ó 33	35 0 15 364			
	FIN		FINALIZA	63 0 0 0			

HILILLO 4

	DADD	R1, R0 , R0	R1 = 0	32 0 0 1		R0	0
	DADDI	R4, R0, #4	R4 = 4	8 0 4 4		R1	¿?
	DADDI	R2, R0, #96	R2 = 96	8 0 2 96		R2	352
	DADDI	R3, R0, #64	R3 = 64	8 0 3 64		R3	0
ET1	DADDI	R5, R0, #2	R5 = 2	8 0 5 2		R4	4
	LW	R6, 0(R2)	R6 = M[R2] = 0,1,2,3	35 2 6 0		R5	0
	LW	R7, 4(R2)	R7 = M[R2+4] = 0,1,2,3	35 2 7 4		R6	0, 1, 2 ó 3
	LW	R8, 8(R2)	R8 = M[R2+8] = 0,1,2,3	35 2 8 8		R7	0, 1, 2 ó 3
	LW	R9, 12(R2)	R9 = M[R2+12] = 0,1,2,3	35 2 9 12		R8	0, 1, 2 ó 3
	DSUB	R3, R3, R4	R3 -= 4	34 3 4 3		R9	0, 1, 2 ó 3
	DADDI	R2, R2, #16	R2 +=16	8 2 2 16		R11	0 ó 99
	DADD	R1, R1, R6	R1 += R6	32 1 6 1		R12	0 ó 88
	DADD	R1, R1, R7	R1 += R7	32 1 7 1		R13	0 ó 55
	DADD	R1,R1, R8	R1 += R8	32 1 8 1	**4**	R14	0 ó 44
	DADD	R1,R1, R9	R1 += R9	32 1 9 1		R31	33
ET2	DADDI	R5, R5, #-1	R5 -= 1	8 5 5 -1			
	BNEZ	R5, **ET2**	Ejecuta el salto 2 veces	5 5 0 -2			
	BNEZ	R3**, ET1**	Ejecuta el salto 15 veces (16 en total)	5 3 0 -14			
	SW	R1, 380(R0)	M[380]= R1	43 0 1 380			
	DADDI	R31, R0, # 33	R31 = 33	8 0 31 33			
	SW	R31, 364 (R0)	M[364] = 33	43 0 31 364			
	LW	R11, 368 (R0)	R11 = M [368] = 0 ó 99	35 0 11 368			
	LW	R12 , 0 (R0)	R12 = M [0] = 0 ó 88	35 0 12 0			
	LW	R13, 92(R0)	R13= M [92] = 0 ó 55	35 0 13 92			
	LW	R14, 28(R0)	R14 = M[28] = 0 ó 44	35 0 14 28			
	FIN		FINALIZA	63 0 0 0			

HILILLO 5

	DADDI	R4, R0, #10	CICLO "ATRASO" SE HARÁ 10 VECES	8 0 4 10		R0	0
	DSUB	R5, R5, R5	R5 = 0	34 5 5 5		R1	0
ATRASE	DADDI	R4, R4, # -1	Se hace (R4 - 1) 10 VECES (HASTA 0)	8 4 4 -1		R2	2
	DADD	R5, R5, R4	AL FINAL R5 = 45	32 5 4 5		R3	0
	BNEZ	R4, ATRASE	SI R4 = 0 SALE	5 4 0 -3		R4	0
	JAL	16	Salta 16 bytes (4 inst.) y llega al DADDI R21,R0,#12. (R31 = pc, pc = pc + 16 = ?)	3 0 0 16		R5	45
	DMUL	R22, R22, R2	R22 = 21 *2 = 42	12 22 2 22		R21	0
	SW	R5, 64(R0)	M(64) = R5 = 45	43 0 5 64		R22	42
	SW	R22, 68(R0)	M(68) = R22 = 42	43 0 22 68		R23	1
	FIN		**FIN DE HILO 5**	63 0 0 0	**5**	R31	Dirección en memoria de la instrucción DMUL que sigue al JAL
	DADDI	R21, R0, #12	R21 =12	8 0 21 12			
	DSUB	R22, R22, R22	R22 = 0	34 22 22 22			
	DADDI	R2, R0, #2	R2 =2	8 0 2 2			
SIGA	DDIV	R23, R21, R2	R23 = R21/R2 = R21/2 R21 SIEMPRE ES PAR	14 21 2 23			
	DADDI	R21, R21, # -2	Para finalizar el ciclo se resta 2 cada vez a R21	8 21 21 -2			
	DADD	R22, R22, R23	R22 = R22 + R23 (se acumulará en R22 (12/2 + 10/2 + 8/2 + 6/2+4/2+2/2) = 21)	32 22 23 22			
	BNEZ	R21, SIGA	Se hace el ciclo 1 vez más (solo se hará 6 veces pues R21 disminuye de 2 en 2 a partir de 12)	5 21 0 -4			
	JR	31	PC = R31 =? SALTA A LA MULTIPLICACIÓN	2 31 0 0			

Sección Mem Compartida DATOS																		
0	0	88	4	64	45	8	128	1	12	192	2	16	256	2ó3ó4	20	320	3
	4	0		68	42		132	1		196	2		260	2ó3ó4		324	3
	8	0		72	0		136	1		200	2		264	2ó3ó4		328	3
	12	0		76	0		140	1		204	2		268	2ó3ó4		332	3
1	16	0	5	80	0	9	144	1	13	208	2	17	272	3 ó 4	21	336	3
	20	R30 de hilo 3		84	0		148	1		212	2		276	3 ó 4		340	3
	24	0		88	0		152	1		216	2		280	3 ó 4		344	3
	28	44		92	55		156	1		220	2		284	3 ó 4		348	3
2	32	0	6	96	0	10	160	1 ó 2	14	224	2	18	288	3	22	352	0
	36	0		100	0		164	1 ó 2		228	2		292	3		356	0
	40	0		104	0		168	1 ó 2		232	2		296	3		360	0
	44	0		108	0		172	1 ó 2		236	2		300	3		364	33
3	48	0	7	112	1	11	176	1 ó 2	15	240	2ó3	19	304	3	23	368	99
	52	0		116	1		180	1 ó 2		244	2ó3		308	3		372	0
	56	0		120	1		184	1 ó 2		248	2ó3		312	3		376	0
	60	0		124	1		188	1 ó 2		252	2ó3		316	3		380	R1 de hilo 4

Resultados en registros para cada hilo

0

R0	0
R1	1
R2	192
R4	4
R5	0
R12	0 ó 88
R13	0 ó 55
R14	0 ó 44
R15	0 ó 33
R20	0
R31	99

1

R0	0
R2	2
R4	4
R5	0
R11	0 ó 99
R13	0 ó 55
R14	0 ó 44
R15	0 ó 33
R16	272
R28	0
R31	88

2

R0	0
R3	3
R4	4
R5	0
R11	0 ó 99
R12	0 ó 88
R14	0 ó 44
R15	0 ó 33
R24	352
R28	0
R31	55

3

R0	0
R3	0, 2, 4, 5 ó 6
R4	4
R5	0, 2 ó 3
R6	0, 2 ó 3
R8	0
R10	0, 2, 4, 5 ó 6
R11	0 ó 99
R12	0 ó 88
R13	0 ó 55
R15	0 ó 33
R25	288
R30	+R3 + R10 2 veces
R31	44

4

R0	0
R1	¿?
R2	352
R3	0
R4	4
R5	0
R6	0, 1, 2 ó 3
R7	0, 1, 2 ó 3
R8	0, 1, 2 ó 3
R9	0, 1, 2 ó 3
R11	0 ó 99
R12	0 ó 88
R13	0 ó 55
R14	0 ó 44
R31	33

5

R0	0
R1	0
R2	2
R3	0
R4	0
R5	45
R21	0
R22	42
R23	1
R31	Dirección en memoria de la instrucción DMUL que sigue al JAL