

The figure is a timing diagram with three horizontal axes: **Time**, **clk**, and two data signals: **num1[7:0]** and **res1[7:0]**. The vertical axis represents time in seconds, with major ticks at 0, 10 sec, 20 sec, 30 sec, and 40 sec.

- clk**: A periodic square wave signal that toggles every 2 seconds.
- num1[7:0]**: A 2-bit signal that changes its value every 10 seconds. The values are: xx (0-9s), 00 (10-19s), 01 (20-29s), 02 (30-39s), 03 (40-49s), 04 (50-59s), 05 (60-69s), 06 (70-79s), 07 (80-89s), 08 (90-99s).
- res1[7:0]**: A 32-bit signal that changes its value every 4 seconds. The values are: 0 (0-3s), 4 (4-7s), 8 (8-11s), 12 (12-15s), 16 (16-19s), 20 (20-23s), 24 (24-27s), 28 (28-31s), 32 (32-35s).

Time

Signal	0	10	20	30	40
clk	0	1	0	1	0
num1[7:0]	xx	00	01	02	03
res1[7:0]	xxx	0	4	8	12

Time

Signal	0	10	20	30	40
clk	0	1	0	1	0
num1[7:0]	xx	00	01	02	03
res1[7:0]	xxx	0	4	8	12

Time

Signal	0	10	20	30	40
clk	0	1	0	1	0
num1[7:0]	xx	00	01	02	03
res1[7:0]	xxx	0	4	8	12

Time	clk	num1[7:0]	res1[7:0]
0	0	00	00000000
10	1	01	00000004
20	0	02	00000008
30	1	03	00000012
35	0	04	00000016
40	1	05	00000020
45	0	06	00000024
50	1	07	00000028
55	0	08	00000032

Time	clk	num1[7:0]	res1[7:0]
0	0	00	00000000
10	1	01	00000004
20	0	02	00000008
30	1	03	00000012
35	0	04	00000016
40	1	05	00000020
45	0	06	00000024
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0	0	00	00000000
10	1	01	00000004
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30	1	03	00000012
35	0	04	00000016
40	1	05	00000020
45	0	06	00000024
50	1	07	00000028
55	0	08	00000032

Time

Signal	0	10	20	30	40
clk	0	1	0	1	0
num1[7:0]	xx	xx	xx	xx	xx
res1[7:0]	0	4	8	12	16