

Table 3: The parent of some nodes $x \in V(CQ_6)$ in T_2 rooted at $r = 011011_2 = 27$.

$$N_2(27) = 011101_2 = 29$$

$$\overline{N}_2(27) = 011111_2 = 31$$

x	x'	$I_2(x)$	$I_2(x')$	$\alpha_2(x)$	$H_2(x)$	$j = \text{NEXT}(2, x)$	$\text{PARENT}(T_2, x)$
(0) 000000	000000	{3, 4}	{3, 4}	2	{0, 2, 3, 4}	2	$= N_2(0) = 000100$ (4)
(1) 000001	000011	{3, 4}	{3, 4}	2	{2, 3, 4}	2	$= N_2(1) = 000111$ (7)
(2) 000010	000010	{3, 4}	{3, 4}	2	{0, 1, 2, 3, 4}	2	$= N_2(2) = 000110$ (6)
(3) 000011	000001	{3, 4}	{3, 4}	2	{1, 2, 3, 4}	2	$= N_2(3) = 000101$ (5)
(4) 000100	001100	{3, 4}	{4}	1	{0, 1, 3, 4}	1	$= N_1(4) = 000110$ (6)
(5) 000101	001111	{3, 4}	{4}	1	{1, 3, 4}	1	$= N_1(5) = 000111$ (7)
(6) 000110	001110	{3, 4}	{4}	1	{0, 3, 4}	0	$= N_0(6) = 000111$ (7)
(7) 000111	001101	{3, 4}	{4}	1	{3, 4}	4	$= N_4(7) = 011101$ (29)
(8) 001000	001000	{4}	{4}	1	{0, 1, 2, 4}	2	$= N_2(8) = 001100$ (12)
(9) 001001	001011	{4}	{4}	1	{1, 2, 4}	2	$= N_2(9) = 001111$ (15)
(10) 001010	001010	{4}	{4}	1	{0, 2, 4}	2	$= N_2(10) = 001110$ (14)
(11) 001011	001001	{4}	{4}	1	{2, 4}	2	$= N_2(11) = 001101$ (13)
(12) 001100	000100	{4}	{3, 4}	2	{0, 4}	0	$= N_0(12) = 001101$ (13)
(13) 001101	000111	{4}	{3, 4}	2	{4}	4	$= N_4(13) = 010111$ (23)
(14) 001110	000110	{4}	{3, 4}	2	{0, 1, 4}	1	$= N_1(14) = 001100$ (12)
(15) 001111	000101	{4}	{3, 4}	2	{1, 4}	1	$= N_1(15) = 001101$ (13)
(16) 010000	110000	{3}	{3, 5}	1	{0, 1, 2, 3}	2	$= N_2(16) = 010100$ (20)
(17) 010001	110011	{3}	{3, 5}	1	{1, 2, 3}	2	$= N_2(17) = 010111$ (23)
(18) 010010	110010	{3}	{3, 5}	1	{0, 2, 3}	2	$= N_2(18) = 010110$ (22)
(19) 010011	110001	{3}	{3, 5}	1	{2, 3}	2	$= N_2(19) = 010101$ (21)
(20) 010100	111100	{3}	{5}	1	{0, 1, 3}	1	$= N_1(20) = 010110$ (22)
(21) 010101	111111	{3}	{5}	1	{1, 3}	1	$= N_1(21) = 010111$ (23)
(22) 010110	111110	{3}	{5}	1	{0, 3}	0	$= N_0(22) = 010111$ (23)
(23) 010111	111101	{3}	{5}	1	{3}	3	$= N_3(23) = 011101$ (29)
(24) 011000	111000	{}	{5}	0	{0, 2}	2	$= N_2(24) = 011100$ (28)
(25) 011001	111011	{}	{5}	0	{2}	2	$= N_2(25) = 011111$ (31)
(26) 011010	111010	{}	{5}	0	{0, 1, 2}	2	$= N_2(26) = 011110$ (30)
(27) 011011	-	-	-	-	-	-	- (root)
(28) 011100	110100	{}	{3, 5}	0	{0}	0	$= N_0(28) = 011101$ (29)
(29) 011101	110111	{}	{3, 5}	0	{}	2	$= N_2(29) = 011011$ (27)
(30) 011110	110110	{}	{3, 5}	0	{0, 1}	1	$= N_1(30) = 011100$ (28)
(31) 011111	110101	{}	{3, 5}	0	{1}	1	$= N_1(31) = 011101$ (29)
(32) 100000	100000	{3, 4, 5}	{3, 4, 5}	3	{0, 1, 2, 3, 4, 5}	2	$= N_2(32) = 100100$ (36)
(33) 100001	100011	{3, 4, 5}	{3, 4, 5}	3	{1, 2, 3, 4, 5}	2	$= N_2(33) = 100111$ (39)
(34) 100010	100010	{3, 4, 5}	{3, 4, 5}	3	{0, 2, 3, 4, 5}	2	$= N_2(34) = 100110$ (38)
(35) 100011	100001	{3, 4, 5}	{3, 4, 5}	3	{2, 3, 4, 5}	2	$= N_2(35) = 100101$ (37)
(36) 100100	101100	{3, 4, 5}	{4, 5}	3	{0, 1, 3, 4, 5}	1	$= N_1(36) = 100110$ (38)
(37) 100101	101111	{3, 4, 5}	{4, 5}	3	{1, 3, 4, 5}	1	$= N_1(37) = 100111$ (39)
(38) 100110	101110	{3, 4, 5}	{4, 5}	3	{0, 3, 4, 5}	0	$= N_0(38) = 100111$ (39)
(39) 100111	101101	{3, 4, 5}	{4, 5}	3	{3, 4, 5}	5	$= N_5(39) = 001101$ (13)
(40) 101000	101000	{4, 5}	{4, 5}	2	{0, 2, 4, 5}	2	$= N_2(40) = 101100$ (44)
(41) 101001	101011	{4, 5}	{4, 5}	2	{2, 4, 5}	2	$= N_2(41) = 101111$ (47)
(42) 101010	101010	{4, 5}	{4, 5}	2	{0, 1, 2, 4, 5}	2	$= N_2(42) = 101110$ (46)
(43) 101011	101001	{4, 5}	{4, 5}	2	{1, 2, 4, 5}	2	$= N_2(43) = 101101$ (45)
(44) 101100	100100	{4, 5}	{3, 4, 5}	2	{0, 4, 5}	0	$= N_0(44) = 101101$ (45)
(45) 101101	100111	{4, 5}	{3, 4, 5}	2	{4, 5}	5	$= N_5(45) = 000111$ (7)
(46) 101110	100110	{4, 5}	{3, 4, 5}	2	{0, 1, 4, 5}	1	$= N_1(46) = 101100$ (44)
(47) 101111	100101	{4, 5}	{3, 4, 5}	2	{1, 4, 5}	1	$= N_1(47) = 101101$ (45)
(48) 110000	010000	{3, 5}	{3}	2	{0, 2, 3, 5}	2	$= N_2(48) = 110100$ (52)
(49) 110001	010011	{3, 5}	{3}	2	{2, 3, 5}	2	$= N_2(49) = 110111$ (55)
(50) 110010	010010	{3, 5}	{3}	2	{0, 1, 2, 3, 5}	2	$= N_2(50) = 110110$ (54)
(51) 110011	010001	{3, 5}	{3}	2	{1, 2, 3, 5}	2	$= N_2(51) = 110101$ (53)
(52) 110100	011100	{3, 5}	{}	1	{0, 1, 3, 5}	1	$= N_1(52) = 110110$ (54)
(53) 110101	011111	{3, 5}	{}	1	{1, 3, 5}	1	$= N_1(53) = 110111$ (55)
(54) 110110	011110	{3, 5}	{}	1	{0, 3, 5}	0	$= N_0(54) = 110111$ (55)
(55) 110111	011101	{3, 5}	{}	1	{3, 5}	5	$= N_5(55) = 011101$ (29)
(56) 111000	011000	{5}	{}	1	{0, 1, 2, 5}	2	$= N_2(56) = 111100$ (60)
(57) 111001	011011	{5}	{}	1	{1, 2, 5}	2	$= N_2(57) = 111111$ (63)
(58) 111010	011010	{5}	{}	1	{0, 2, 5}	2	$= N_2(58) = 111110$ (62)
(59) 111011	011001	{5}	{}	1	{2, 5}	2	$= N_2(59) = 111101$ (61)
(60) 111100	010100	{5}	{3}	2	{0, 5}	0	$= N_0(60) = 111101$ (61)
(61) 111101	010111	{5}	{3}	2	{5}	5	$= N_5(61) = 010111$ (23)
(62) 111110	010110	{5}	{3}	2	{0, 1, 5}	1	$= N_1(62) = 111100$ (60)
(63) 111111	010101	{5}	{3}	2	{1, 5}	1	$= N_1(63) = 111101$ (61)