Remodeling Chemical Lab: AOA CPM Example using array formulas in EXCEL

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CPM Table for Activity-on-Arrow Network

I	J	Activity Description	T	ESD	EFD	LSD	LFD	TF	FF	INTF	INDF	Crit
02	04	Strip room	3	0	3	1	4	1	0	1	0	
02	12	Obtain fume hood	10	0	10	4	14	4	2	2	2	
02	14	Obtain cabinets	10	0	10	3	13	3	2	1	2	
02	20	Obtain chemical sink	10	0	10	7	17	7	4	3	4	
02	24	Painter availability	20	0	20	0	20	0	0	0	0	C
02	28	Obtain vinyl floor covering	5	0	5	21	26	21	21	0	21	
04	06	Rough-in plumbing and electrical	5	3	8	4	9	1	0	1	0	
04	08	Replace existing fume duct	3	3	6	6	9	3	2	1	1	
06	08	Dummy	0	8	8	9	9	1	0	1	0	
06	10	Repair floor	1	8	9	12	13	4	3	1	2	
08	10	Repair walls and ceiling	4	8	12	9	13	1	0	1	0	
10	12	Dummy	0	12	12	14	14	2	0	2	0	
10	14	Dummy	0	12	12	13	13	1	0	1	0	
12	16	Install new fume hood	1	12	13	14	15	2	0	2	0	
14	16	Dummy	0	12	12	15	15	3	1	2	0	
14	22	Install wall cabinets	5	12	17	13	18	1	0	1	0	
16	18	Install 1/3 base cabinets	1	13	14	15	16	2	0	2	0	
18	20	Dummy	0	14	14	17	17	3	0	3	0	
18	22	Install 2/3 base cabinets	2	14	16	16	18	2	1	1	0	
20	22	Install chemical sink	1	14	15	17	18	3	2	1	0	
22	24	Finish plumbing and electrical	2	17	19	18	20	1	1	0	0	
24	26	Dummy	0	20	20	23	23	3	0	3	0	
24	28	Paint cabinets	6	20	26	20	26	0	0	0	0	C
26	28	Paint walls and ceiling	3	20	23	23	26	3	3	0	0	
28	30	Lay vinyl floor	1	26	27	26	27	0	0	0	0	C

Correct formulas for FF and INDF, when all succ. or pred. are dummies, are difficult to enter in Excel.

Correct INDF is 3. (The formula for INDF, when all predecessors are dummies, is difficult to enter in Excel.)

Project Duration = 27