

Tower block

There is a high tower block in Peckham, which has 100 windows, one for each flat.

There are 100 window cleaners who have been given the job of cleaning them all.

Before the first window cleaner finishes for the day he opens all the windows to air the flats. He goes home.

The second window cleaner does the same thing, except that he goes to every second window, cleans it and instead of opening the windows, he closes them. He goes home.

The third window cleaner starts at window three and if the window is closed, he opens it and if it is open he closes it.

Each window cleaner in turn goes to their own window and does the same before going home.

After the hundredth window cleaner has left for home the windows have all been cleaned. How many windows are left open in the tower block? Which flats are left with open windows?



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100