

Using the MIS\_QUICK algorithm, find the size of the maximally independent set. Base your weights on column counts. Show your work, including the weights at each stage.

	P1	P2	P3	P4	P5	P6	P7	
m0	x		x		x			w = 8
m1		x	x			x		w = 8
m2					x	x		w = 6
m5	x				x			w = 6
m7						x	x	w = 5
m8							x	w = 2
m9		x		x				w = 5
m10	x	x		x				w = 8

MIS = {m8}      Remove m8, m7

	P1	P2	P3	P4	P5	P6	P7	
m0	X		X		X			w = 8
m1		X	X			X		w = 7
m2					X	X		w = 5
m5	X				X			w = 6
m9		X		X				w = 5
m10	X	X		X				w = 8

MIS = {m8, m2}      Remove m2, m0, m1, m5

	P1	P2	P3	P4	P5	P6	P7	
m9		X		X				w = 4
m10	X	X		X				w = 5

MIS = {m8, m2, m9}      Remove m10

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matrix empty (|M| ≥ 0 not true)

MIS = {m8, m2, m9}

|MIS| = 3