

Our Rules**Rule 1:**

IF x_1 is short AND x_2 is long AND x_3 is short AND x_4 is short THEN $y = g_1$

Rule 2:

IF x_1 is medium AND x_2 is small AND x_3 is medium AND x_4 is medium THEN $y = g_2$

Rule 3:

IF x_1 is long AND x_2 is medium AND x_3 is long AND x_4 is long THEN $y = g_3$

		Center	W	
x_1	4.3 – 6	5	0.85	Short
	5.2 – 6.9	5.9	0.85	Medium
	6.8 – 7.5	6.6	0.45	Long
x_2	1.7 – 3.8	2.6	1.05	Short
	2.0 – 4.0	3	1	Medium
	2.5 – 4.5	3.5	1	Long
x_3	1.1 – 2.1	1.5	0.5	Short
	3.9 – 4.9	4.3	0.5	Medium
	5.1 – 6.2	5.5	0.55	Long
x_4	-0.6 – 1.2	0.25	0.9	Short
	0.4 – 2.3	1.4	0.95	Medium
	1.2 – 3.1	2	0.95	Long

$$a = \begin{vmatrix} -0.0000 & 0.0000 & -0.0001 & 0.9 \\ -0.1121 & -0.2234 & 0.0029 & 1.2 \\ -0.1020 & -0.0624 & 0.1276 & 0.9 \end{vmatrix}$$

$$b = \begin{vmatrix} 0.6667 \\ 1.7547 \\ 1.8412 \end{vmatrix}$$

Str [$x_1=5.1, x_2=3.5, x_3=1.4, x_4=0.2, g=\text{Iris-setosa}$]

0.8465599583344963

is OK

Str [$x_1=4.9, x_2=3.0, x_3=1.4, x_4=0.2, g=\text{Iris-setosa}$]

0.8465600008265277

is OK

Str [x1=4.7, x2=3.2, x3=1.3, x4=0.2, g=Iris-setosa]	0.8465700008325341	is OK
Str [x1=4.6, x2=3.1, x3=1.5, x4=0.2, g=Iris-setosa]	0.8465500009577647	is OK
Str [x1=5.0, x2=3.6, x3=1.4, x4=0.2, g=Iris-setosa]	0.846560000364657	is OK
Str [x1=5.4, x2=3.9, x3=1.7, x4=0.4, g=Iris-setosa]	1.0265298917001968	is OK
Str [x1=4.6, x2=3.4, x3=1.4, x4=0.3, g=Iris-setosa]	0.9365600006849609	is OK
Str [x1=5.0, x2=3.4, x3=1.5, x4=0.2, g=Iris-setosa]	0.8465500004609093	is OK
Str [x1=4.4, x2=2.9, x3=1.4, x4=0.2, g=Iris-setosa]	0.8465600017894518	is OK
Str [x1=4.9, x2=3.1, x3=1.5, x4=0.1, g=Iris-setosa]	0.7565500006985456	is OK
Str [x1=5.4, x2=3.7, x3=1.5, x4=0.2, g=Iris-setosa]	0.8465499145195714	is OK
Str [x1=4.8, x2=3.4, x3=1.6, x4=0.2, g=Iris-setosa]	0.8465400005527016	is OK
Str [x1=4.8, x2=3.0, x3=1.4, x4=0.1, g=Iris-setosa]	0.7565600008743191	is OK
Str [x1=4.3, x2=3.0, x3=1.1, x4=0.1, g=Iris-setosa]	0.7565900032678109	is OK
Str [x1=5.8, x2=4.0, x3=1.2, x4=0.2, g=Iris-setosa]	0.8465799990697237	is OK
Str [x1=5.7, x2=4.4, x3=1.5, x4=0.4, g=Iris-setosa]	1.026549417492276	is OK
Str [x1=5.4, x2=3.9, x3=1.3, x4=0.4, g=Iris-setosa]	1.0265698911647023	is OK
Str [x1=5.1, x2=3.5, x3=1.4, x4=0.3, g=Iris-setosa]	0.9365599646160503	is OK
Str [x1=5.7, x2=3.8, x3=1.7, x4=0.3, g=Iris-setosa]	0.9365298025376986	is OK
Str [x1=5.1, x2=3.8, x3=1.5, x4=0.3, g=Iris-setosa]	0.9365499707561985	is OK
Str [x1=5.4, x2=3.4, x3=1.7, x4=0.2, g=Iris-setosa]	0.8465298763749195	is OK
Str [x1=5.1, x2=3.7, x3=1.5, x4=0.4, g=Iris-setosa]	1.0265408405180427	is OK
Str [x1=4.6, x2=3.6, x3=1.0, x4=0.2, g=Iris-setosa]	0.846600001224358	is OK
Str [x1=5.1, x2=3.3, x3=1.7, x4=0.5, g=Iris-setosa]	1.1165205114806842	is OK
Str [x1=4.8, x2=3.4, x3=1.9, x4=0.2, g=Iris-setosa]	0.8465100010744091	is OK
Str [x1=5.0, x2=3.0, x3=1.6, x4=0.2, g=Iris-setosa]	0.8465400008234291	is OK
Str [x1=5.0, x2=3.4, x3=1.6, x4=0.4, g=Iris-setosa]	1.0265399791810534	is OK
Str [x1=5.2, x2=3.5, x3=1.5, x4=0.2, g=Iris-setosa]	0.8465499457118805	is OK
Str [x1=5.2, x2=3.4, x3=1.4, x4=0.2, g=Iris-setosa]	0.8465599403454588	is OK
Str [x1=4.7, x2=3.2, x3=1.6, x4=0.2, g=Iris-setosa]	0.8465400007868569	is OK
Str [x1=4.8, x2=3.1, x3=1.6, x4=0.2, g=Iris-setosa]	0.8465400008116896	is OK
Str [x1=5.4, x2=3.4, x3=1.5, x4=0.4, g=Iris-setosa]	1.026524184072909	is OK
Str [x1=5.2, x2=4.1, x3=1.5, x4=0.1, g=Iris-setosa]	0.7565499997033815	is OK
Str [x1=5.5, x2=4.2, x3=1.4, x4=0.2, g=Iris-setosa]	0.8465599992240972	is OK
Str [x1=4.9, x2=3.1, x3=1.5, x4=0.1, g=Iris-setosa]	0.7565500006985456	is OK
Str [x1=5.0, x2=3.2, x3=1.2, x4=0.2, g=Iris-setosa]	0.8465800007937031	is OK
Str [x1=5.5, x2=3.5, x3=1.3, x4=0.2, g=Iris-setosa]	0.8465698430539255	is OK
Str [x1=4.9, x2=3.1, x3=1.5, x4=0.1, g=Iris-setosa]	0.7565500006985456	is OK
Str [x1=4.4, x2=3.0, x3=1.3, x4=0.2, g=Iris-setosa]	0.8465700017277756	is OK
Str [x1=5.1, x2=3.4, x3=1.5, x4=0.2, g=Iris-setosa]	0.8465499581731011	is OK
Str [x1=5.0, x2=3.5, x3=1.3, x4=0.3, g=Iris-setosa]	0.9365700004705346	is OK
Str [x1=4.5, x2=2.3, x3=1.3, x4=0.3, g=Iris-setosa]	0.9365710031309136	is OK
Str [x1=4.4, x2=3.2, x3=1.3, x4=0.2, g=Iris-setosa]	0.8465700013235148	is OK
Str [x1=5.0, x2=3.5, x3=1.6, x4=0.6, g=Iris-setosa]	1.2065399807243609	is OK
Str [x1=5.1, x2=3.8, x3=1.9, x4=0.4, g=Iris-setosa]	1.0264934910118575	is OK
Str [x1=4.8, x2=3.0, x3=1.4, x4=0.3, g=Iris-setosa]	0.9365600009265238	is OK
Str [x1=5.1, x2=3.8, x3=1.6, x4=0.2, g=Iris-setosa]	0.8465399657279765	is OK
Str [x1=4.6, x2=3.2, x3=1.4, x4=0.2, g=Iris-setosa]	0.8465600008568085	is OK
Str [x1=5.3, x2=3.7, x3=1.5, x4=0.2, g=Iris-setosa]	0.8465499361250299	is OK
Str [x1=5.0, x2=3.3, x3=1.4, x4=0.2, g=Iris-setosa]	0.8465600005315806	is OK
Str [x1=7.0, x2=3.2, x3=4.7, x4=1.4, g=Iris-versicolor]	2.4316810524878107	is OK
Str [x1=6.4, x2=3.2, x3=4.5, x4=1.5, g=Iris-versicolor]	2.135431316194782	is OK

Str [x1=6.9, x2=3.1, x3=4.9, x4=1.5, g=Iris-versicolor]	2.918228783708486	is FALSE
Str [x1=5.5, x2=2.3, x3=4.0, x4=1.3, g=Iris-versicolor]	2.1959304333953953	is OK
Str [x1=6.5, x2=2.8, x3=4.6, x4=1.5, g=Iris-versicolor]	2.213871308618532	is OK
Str [x1=5.7, x2=2.8, x3=4.5, x4=1.3, g=Iris-versicolor]	2.063260464335189	is OK
Str [x1=6.3, x2=3.3, x3=4.7, x4=1.6, g=Iris-versicolor]	2.244882325286512	is OK
Str [x1=4.9, x2=2.4, x3=3.3, x4=1.0, g=Iris-versicolor]	1.5680834883684165	is OK
Str [x1=6.6, x2=2.9, x3=4.6, x4=1.3, g=Iris-versicolor]	1.9403214322754885	is OK
Str [x1=5.2, x2=2.7, x3=3.9, x4=1.4, g=Iris-versicolor]	2.259910852618869	is OK
Str [x1=5.0, x2=2.0, x3=3.5, x4=1.0, g=Iris-versicolor]	1.7807946327728847	is OK
Str [x1=5.9, x2=3.0, x3=4.2, x4=1.5, g=Iris-versicolor]	2.2352905806311463	is OK
Str [x1=6.0, x2=2.2, x3=4.0, x4=1.0, g=Iris-versicolor]	1.802220000504263	is OK
Str [x1=6.1, x2=2.9, x3=4.7, x4=1.4, g=Iris-versicolor]	2.116661128392913	is OK
Str [x1=5.6, x2=2.9, x3=3.6, x4=1.3, g=Iris-versicolor]	2.049885410902296	is OK
Str [x1=6.7, x2=3.1, x3=4.4, x4=1.4, g=Iris-versicolor]	2.005468986790763	is OK
Str [x1=5.6, x2=3.0, x3=4.5, x4=1.5, g=Iris-versicolor]	2.2697906819611844	is OK
Str [x1=5.8, x2=2.7, x3=4.1, x4=1.0, g=Iris-versicolor]	1.7132071314586854	is OK
Str [x1=6.2, x2=2.2, x3=4.5, x4=1.5, g=Iris-versicolor]	2.3812503816569666	is OK
Str [x1=5.6, x2=2.5, x3=3.9, x4=1.1, g=Iris-versicolor]	1.899697135867105	is OK
Str [x1=5.9, x2=3.2, x3=4.8, x4=1.8, g=Iris-versicolor]	2.5523526199589273	is FALSE
Str [x1=6.1, x2=2.8, x3=4.0, x4=1.3, g=Iris-versicolor]	2.016970627373384	is OK
Str [x1=6.3, x2=2.5, x3=4.9, x4=1.5, g=Iris-versicolor]	2.304715927501149	is OK
Str [x1=6.1, x2=2.8, x3=4.7, x4=1.2, g=Iris-versicolor]	1.8990007806954556	is OK
Str [x1=6.4, x2=2.9, x3=4.3, x4=1.3, g=Iris-versicolor]	1.9618706816335443	is OK
Str [x1=6.6, x2=3.0, x3=4.4, x4=1.4, g=Iris-versicolor]	2.0374012167393007	is OK
Str [x1=6.8, x2=2.8, x3=4.8, x4=1.4, g=Iris-versicolor]	2.064937364658281	is OK
Str [x1=6.7, x2=3.0, x3=5.0, x4=1.7, g=Iris-versicolor]	3.137980140813317	is FALSE
Str [x1=6.0, x2=2.9, x3=4.5, x4=1.5, g=Iris-versicolor]	2.2472907102569657	is OK
Str [x1=5.7, x2=2.6, x3=3.5, x4=1.0, g=Iris-versicolor]	1.7227841712677037	is OK
Str [x1=5.5, x2=2.4, x3=3.8, x4=1.1, g=Iris-versicolor]	1.9329177964169846	is OK
Str [x1=5.5, x2=2.4, x3=3.7, x4=1.0, g=Iris-versicolor]	1.7782306828117806	is OK
Str [x1=5.8, x2=2.7, x3=3.9, x4=1.2, g=Iris-versicolor]	1.9526207815739267	is OK
Str [x1=6.0, x2=2.7, x3=5.1, x4=1.6, g=Iris-versicolor]	2.6537941172749475	is FALSE
Str [x1=5.4, x2=3.0, x3=4.5, x4=1.5, g=Iris-versicolor]	2.292210746716361	is OK
Str [x1=6.0, x2=3.4, x3=4.5, x4=1.6, g=Iris-versicolor]	2.255591230047895	is OK
Str [x1=6.7, x2=3.1, x3=4.7, x4=1.5, g=Iris-versicolor]	2.1281138331794365	is OK
Str [x1=6.3, x2=2.3, x3=4.4, x4=1.3, g=Iris-versicolor]	2.1074103444715395	is OK
Str [x1=5.6, x2=3.0, x3=4.1, x4=1.3, g=Iris-versicolor]	2.0286305333250136	is OK
Str [x1=5.5, x2=2.5, x3=4.0, x4=1.3, g=Iris-versicolor]	2.1512503899690643	is OK
Str [x1=5.5, x2=2.6, x3=4.4, x4=1.2, g=Iris-versicolor]	2.010033436633725	is OK
Str [x1=6.1, x2=3.0, x3=4.6, x4=1.4, g=Iris-versicolor]	2.0940309221301985	is OK
Str [x1=5.8, x2=2.6, x3=4.0, x4=1.2, g=Iris-versicolor]	1.9752595067536738	is OK
Str [x1=5.0, x2=2.3, x3=3.3, x4=1.0, g=Iris-versicolor]	1.763204662813822	is OK
Str [x1=5.6, x2=2.7, x3=4.2, x4=1.3, g=Iris-versicolor]	2.095940354416016	is OK
Str [x1=5.7, x2=3.0, x3=4.2, x4=1.2, g=Iris-versicolor]	1.8976844061373856	is OK
Str [x1=5.7, x2=2.9, x3=4.2, x4=1.3, g=Iris-versicolor]	2.0400504299635887	is OK
Str [x1=6.2, x2=2.9, x3=4.3, x4=1.3, g=Iris-versicolor]	1.9842905447659518	is OK
Str [x1=5.1, x2=2.5, x3=3.0, x4=1.1, g=Iris-versicolor]	1.8684944628472635	is OK
Str [x1=5.7, x2=2.8, x3=4.1, x4=1.3, g=Iris-versicolor]	2.062100428607793	is OK
Str [x1=6.3, x2=3.3, x3=6.0, x4=2.5, g=Iris-virginica]	4.007126669205597	is OK
Str [x1=5.8, x2=2.7, x3=5.1, x4=1.9, g=Iris-virginica]	3.0660774907486776	is OK

Str [x1=7.1, x2=3.0, x3=5.9, x4=2.1, g=Iris-virginica]	3.572639087620379	is OK
Str [x1=6.3, x2=2.9, x3=5.6, x4=1.8, g=Iris-virginica]	3.0397357576306785	is OK
Str [x1=6.5, x2=3.0, x3=5.8, x4=2.2, g=Iris-virginica]	3.5247127226909125	is OK
Str [x1=7.6, x2=3.0, x3=6.6, x4=2.1, g=Iris-virginica]	3.6092579927965756	is OK
Str [x1=4.9, x2=2.5, x3=4.5, x4=1.7, g=Iris-virginica]	2.7002642584278704	is OK
Str [x1=7.3, x2=2.9, x3=6.3, x4=1.8, g=Iris-virginica]	3.3381193016350186	is OK
Str [x1=6.7, x2=2.5, x3=5.8, x4=1.8, g=Iris-virginica]	3.36141620427733	is OK
Str [x1=7.2, x2=3.6, x3=6.1, x4=2.5, g=Iris-virginica]	3.9105199868322784	is OK
Str [x1=6.5, x2=3.2, x3=5.1, x4=2.0, g=Iris-virginica]	3.1888027707808986	is OK
Str [x1=6.4, x2=2.7, x3=5.3, x4=1.9, g=Iris-virginica]	3.134414421052665	is OK
Str [x1=6.8, x2=3.0, x3=5.5, x4=2.1, g=Iris-virginica]	3.552078535460279	is OK
Str [x1=5.7, x2=2.5, x3=5.0, x4=2.0, g=Iris-virginica]	3.171886922301894	is OK
Str [x1=5.8, x2=2.8, x3=5.1, x4=2.4, g=Iris-virginica]	3.8840528345460994	is OK
Str [x1=6.4, x2=3.2, x3=5.3, x4=2.3, g=Iris-virginica]	3.5983190673917793	is OK
Str [x1=6.5, x2=3.0, x3=5.5, x4=1.8, g=Iris-virginica]	3.0667023872665506	is OK
Str [x1=7.7, x2=3.8, x3=6.7, x4=2.2, g=Iris-virginica]	3.453563307057617	is OK
Str [x1=7.7, x2=2.6, x3=6.9, x4=2.3, g=Iris-virginica]	3.5832285791397847	is OK
Str [x1=6.0, x2=2.2, x3=5.0, x4=1.5, g=Iris-virginica]	2.5210040754200245	is OK
Str [x1=6.9, x2=3.2, x3=5.7, x4=2.3, g=Iris-virginica]	3.7350396960675623	is OK
Str [x1=5.6, x2=2.8, x3=4.9, x4=2.0, g=Iris-virginica]	2.9163527096293054	is OK
Str [x1=7.7, x2=2.8, x3=6.7, x4=2.0, g=Iris-virginica]	3.1933957839629397	is OK
Str [x1=6.3, x2=2.7, x3=4.9, x4=1.8, g=Iris-virginica]	2.620360758458517	is OK
Str [x1=6.7, x2=3.3, x3=5.7, x4=2.1, g=Iris-virginica]	3.5690492998947945	is OK
Str [x1=7.2, x2=3.2, x3=6.0, x4=1.8, g=Iris-virginica]	3.2927178139807984	is OK
Str [x1=6.2, x2=2.8, x3=4.8, x4=1.8, g=Iris-virginica]	2.6080823063407115	is OK
Str [x1=6.1, x2=3.0, x3=4.9, x4=1.8, g=Iris-virginica]	2.5758783369349967	is OK
Str [x1=6.4, x2=2.8, x3=5.6, x4=2.1, g=Iris-virginica]	3.4162881485514984	is OK
Str [x1=7.2, x2=3.0, x3=5.8, x4=1.6, g=Iris-virginica]	3.0996780592823994	is OK
Str [x1=7.4, x2=2.8, x3=6.1, x4=1.9, g=Iris-virginica]	3.400035071734274	is OK
Str [x1=7.9, x2=3.8, x3=6.4, x4=2.0, g=Iris-virginica]	3.1637772083590643	is OK
Str [x1=6.4, x2=2.8, x3=5.6, x4=2.2, g=Iris-virginica]	3.5327627328800677	is OK
Str [x1=6.3, x2=2.8, x3=5.1, x4=1.5, g=Iris-virginica]	2.5207056371278913	is OK
Str [x1=6.1, x2=2.6, x3=5.6, x4=1.4, g=Iris-virginica]	2.4980906956139446	is FALSE
Str [x1=7.7, x2=3.0, x3=6.1, x4=2.3, g=Iris-virginica]	3.7160391553780663	is OK
Str [x1=6.3, x2=3.4, x3=5.6, x4=2.4, g=Iris-virginica]	3.8605598629232385	is OK
Str [x1=6.4, x2=3.1, x3=5.5, x4=1.8, g=Iris-virginica]	3.0518550760930716	is OK
Str [x1=6.0, x2=3.0, x3=4.8, x4=1.8, g=Iris-virginica]	2.5858225056897903	is OK
Str [x1=6.9, x2=3.1, x3=5.4, x4=2.1, g=Iris-virginica]	3.5229996121057305	is OK
Str [x1=6.7, x2=3.1, x3=5.6, x4=2.4, g=Iris-virginica]	3.8389197365135717	is OK
Str [x1=6.9, x2=3.1, x3=5.1, x4=2.3, g=Iris-virginica]	3.6647195792575618	is OK
Str [x1=5.8, x2=2.7, x3=5.1, x4=1.9, g=Iris-virginica]	3.0660774907486776	is OK
Str [x1=6.8, x2=3.2, x3=5.9, x4=2.3, g=Iris-virginica]	3.7706184692458087	is OK
Str [x1=6.7, x2=3.3, x3=5.7, x4=2.5, g=Iris-virginica]	3.9291997129362177	is OK
Str [x1=6.7, x2=3.0, x3=5.2, x4=2.3, g=Iris-virginica]	3.7039894161926967	is OK
Str [x1=6.3, x2=2.5, x3=5.0, x4=1.9, g=Iris-virginica]	3.0020303040608223	is OK
Str [x1=6.5, x2=3.0, x3=5.2, x4=2.0, g=Iris-virginica]	3.234428869805077	is OK
Str [x1=6.2, x2=3.4, x3=5.4, x4=2.3, g=Iris-virginica]	3.611185662535572	is OK
Str [x1=5.9, x2=3.0, x3=5.1, x4=1.8, g=Iris-virginica]	2.9150750314574085	is OK

Total OK is 145 = 96%

Total FALSE is 5 = 4%