Hours Studies	Exam Score	Predicted Score-M1	Predicted Score-M2	Actual Pass?	Predicted Pass? -M3	Predicted Pass? -M4
1	68	79.03	72.02	N	Y	Y
1	78	79.03	72.02	N	Y	Y
1	75	79.03	72.02	N	Y	N
2	83	82.11	84.6	Y	Y	Y
2	80	82.11	84.6	Y	Y	Y
2	78	82.11	84.6	N	Y	N
2	89	82.11	84.6	Y	Y	Y
2	93	82.11	84.6	Y	Y	Y
3	90	85.19	89.50	Y	Y	Y
3	91	85.19	89.50	Y	Y	Y
4	94	88.27	90.08	Y	Y	Y
5	88	91.35	87.33	Y	Y	Y
5	84	91.35	87.33	Y	Y	Y
5	90	91.35	87.33	Y	Y	Y
6	94	94.43	92	Y	Y	Y

1. Relative Error:

Hours Studies	Exam Score	Predicted Score-M2	Relative Error M2	Predicted Score-M1	Relative Error M1
1	68	72.02	(72.0-68)/ 68=5.88%	79.03	(79.03-68)/ 68=16.22%
1	78	72.02	(72.02-78)/ 78=7.66%	79.03	(79.03-78)/ 78= 1.32%
1	75	72.02	(72.02-75)/ 75= 3.97%	79.03	(79.03-75)/ 75= 5.37%
2	83	84.6	(84.6-83)/ 83=1.92%	82.11	(82.11-83)/ 83= 1.07%
2	80	84.6	(84.6-80)/ 80=5.75%	82.11	(82.11-80)/ 80= 2.63%
2	78	84.6	(84.6-78)/ 78=8.46%	82.11	(82.11-78)/ 78= 5.26%
2	89	84.6	(84.6-89)/ 89=4.94%	82.11	(82.11-89)/ 89= 7.74%
2	93	84.6	(84.6-93)/ 93=9.03%	82.11	(82.11-93)/ 93= 11.70%
3	90	89.50	(89.50-90)/ 90=0.5%	85.19	(85.19-90)/ 90= 5.34%
3	91	89.50	(89.50-91)/ 91=1.64%	85.19	(85.19-91)/ 91= 6.38%
4	94	90.08	(90.08-94)/94=4.17%	88.27	(88.27-94)/94= 6.09%
5	88	87.33	(87.33-88)/88=0.76%	91.35	(91.35-88)/88= 3.80%
5	84	87.33	(87.33-84)/84=3.96%	91.35	(91.35-84)/84= 8.75%
5	90	87.33	(87.33-90)/90=2.96%	91.35	(91.35-90)/90= 1.5%
6	94	92	(92-94)/94=2.127%	94.43	(94.43-94)/94= 0.45%

2. Absolute Error

Hours Studies	Exam Score	Predicted Score-M2	Absolute Error M2	Predicted Score-M1	Absolute Error M1
1	68	72.02	(72.0-68) = 4	79.03	(79.03-68) = 11.03
1	78	72.02	(72.02-78) = 5.98	79.03	(79.03-78) = 1.03
1	75	72.02	(72.02-75) = 2.98	79.03	(79.03-75) = 4.03
2	83	84.6	(84.6-83) = 1.6	82.11	(82.11-83) = 0.89
2	80	84.6	(84.6-80) = 4.6	82.11	(82.11-80) = 2.11
2	78	84.6	(84.6-78) = 6.6	82.11	(82.11-78) = 4.11
2	89	84.6	(84.6-89) = 4.4	82.11	(82.11-89) = 6.89
2	93	84.6	(84.6-93) = 8.4	82.11	(82.11-93) = 10.89
3	90	89.50	(89.50-90) =0.5	85.19	(85.19-90) = 4.81
3	91	89.50	(89.50-91) =1.5	85.19	(85.19-91) = 5.81
4	94	90.08	(90.08-94) = 3.92	88.27	(88.27-94) = 5.73
5	88	87.33	(87.33-88) = 0.67	91.35	(91.35-88) = 3.35
5	84	87.33	(87.33-84) =3.33	91.35	(91.35-84) = 7.35
5	90	87.33	(87.33-90) =2.67	91.35	(91.35-90) = 1.35
6	94	92	(92-94) =2	94.43	(94.43-94) = 0.43

3. Mean Absolute Error - MAE

   M1: 47.15/15 = 3.14
   M2: 69.81/15 = 4.654

4. Root Mean Squared Error – RMSE
   M1: 258.3739/15 = $\sqrt{17.22}$ = 4.14
   M2: 484.1407/15 = $\sqrt{32.276}$ = 5.68

5. Precision
   TP/TP+FP
   M3: 11/11+4 = 0.73
   M4: 13/13+2= 0.86

6. Recall
   TP/TP+FN
   M3: 11/11+0 = 1
   M4: 13/13+0= 1

7. Accuracy
   TP+TN/TP+TN+FP+FN

M3: 11+0/11+0+4+0 = 0.73
M4: 13+2/13+2+2+0 = 0.88

8. F1 Score

M3: 2* (Precision*Recall)/ (Precision+Recall)
M3: 2* (0.73 /1.73)
M3: 0.84

M4: 2* (Precision*Recall)/ (Precision+Recall)
M4: 2* (0.86 /1.86)
M4: 0.92

9. AUC

TPR (True Positive Rate) / Recall /Sensitivity: TP/TP+FN

M3: 11/11+0 = 1
M4: 13/13+0= 1

FPR (False Positive Rate): FP/FP+TN

M3: 4/4+0 = 1
M4: 2/2+2 = 0.5