Confusion Matrix

Answer (3) (a)

True Positive (TP) = 4

True Negative (TN) = 3

False positive (FP) = 1

False negative (FN) = 2

TP	FP
4	1
FN	TN
2	3

$$\text{Accuracy} = \frac{TN + TP}{TN + FP + TP + FN}$$

$$= \frac{3+4}{3+1+4+2} = \frac{7}{10}$$

Accuracy $= 0.7$

$$\text{Precision} = \frac{TP}{TP+FP} = \frac{4}{4+1} = \frac{4}{5} = 0.8$$

$$\text{Recall} = \frac{TP}{TP+FN} = \frac{4}{4+2} = \frac{4}{6} = 0.67$$

$$F_1 \text{ Score} = 2 \times \frac{\text{Precision} \times \text{Recall}}{\text{Precision} + \text{Recall}} = \frac{(0.8+0.67)^2}{(0.8 \times 0.67)} \left(\frac{1.47}{0.53}\right)$$

$$= 2 \times 2.774 = 5.55$$