

Error rate:  $(FP + FN) / (P + N)$



Accuracy:  $(TP + TN) / (P + N)$



Sensitivity:  $TP / P$  (Recall)



Specificity:  $TN / N$



Precision:  $TP / (TP + FP)$



False positive rate:  $FP / N$



## F-score

F-score is a harmonic mean of precision and recall.

- $$F_{\beta} = \frac{(1 + \beta^2)(PREC \cdot REC)}{(\beta^2 \cdot PREC + REC)}$$

$\beta$  is commonly 0.5, 1, or 2.

- $$F_{0.5} = \frac{1.25 \cdot PREC \cdot REC}{0.25 \cdot PREC + REC}$$

- $$F_1 = \frac{2 \cdot PREC \cdot REC}{PREC + REC}$$

- $$F_2 = \frac{5 \cdot PREC \cdot REC}{4 \cdot PREC + REC}$$

