ACCURACY, Precision Recall and the F measure [1

$N = 10000$ (population size)

	Predict False	predict TRUE
observed False	9,700	80
observed TRUE	100	120

TN	FP
FN	TP

★ ACCURACY $= \dfrac{9,700 + 120}{10,000}$ $\left(\dfrac{TN + TP}{N}\right)$

$= 0.982$

★ Recall (bottom Row)

$$\dfrac{TP}{TP + FN}$$

$= \dfrac{120}{100 + 120}$ $= 0.5454$

✳ Precision   (2nd Column).

$$= \frac{TP}{TP + FP}$$

$$= \frac{120}{80 + 120} \qquad = \underline{0.60}.$$

✳ F-measure (AKA F - score)

$$F = \frac{2 \times R \times P}{R + P} \qquad \begin{array}{l} R: RECALL \\ P: PRECISION \end{array}$$

$$= \frac{2 \times 0.5454 \times 0.60}{0.5454 + 0.60}$$

$$\approx \frac{0.6545}{1.1454} \approx \underline{0.5713}$$