1. Fill each of the cells of the following generic confusion matrix with one of the following: TP (true positives), TN (true negatives), FP (false positives), FN (false negatives). In parts (a) through (e), provide formulas for the given classification performance metric using this notation.

Actual class	Predicted class	
	PP	PN
P		
N		

(a) accuracy:

(b) recall:

(c) precision:

(d) true negative rate:

(e) F_1 score: