COMPUTER SUBJECT: ML CLASSIFICATION

TYPE: GROUP WORK ASSIGNMENTS/DISCUSSION

IDENTIFICATION: CHAPTER 3/MICL

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LEVEL: EASY

DURATION: 15-20 min

SIZE: 10 lines!!

OBJECTIVE: Understanding logistic regression elements

REQUIREMENTS: **ML Ch. 3**

COMMANDS:

IDENTIFICATION: CHAPTER 3/MICL

ML Chapter 3 Assignments

The following assignments must be solved in smaller groups (2-4 persons) and is followed up by a short presentation in the class the very same day.

Assignment 1
Look at the figure 3.2.
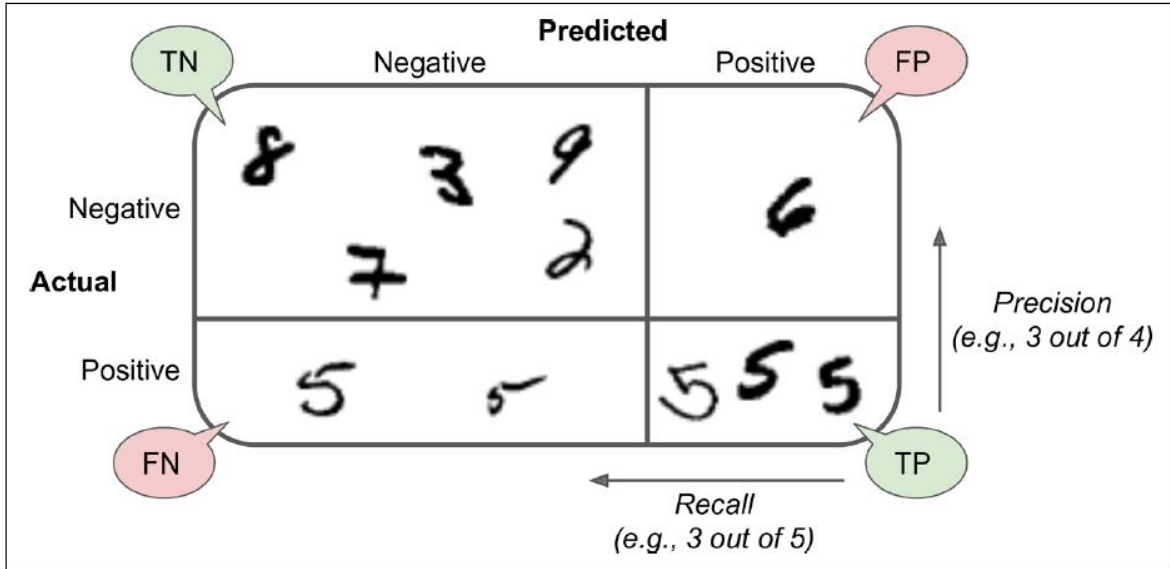What is the number of TN, FP, FN, TP ? That is how many digits in each group ?

Figure 3-2. An illustrated confusion matrix shows examples of true negatives (top left), false positives (top right), false negatives (lower left), and true positives (lower right)

Assignment 2

State the missing numbers and examples based on figure 3.2.

Then calculate the values of P(Precision), R(Recall), TNR(TrueNegativeRate) and FPR(FalsePositiveRate).

Shorts	Description	Numbers/how many	Examples/Values
Total	All numbers		
TP	TruePositive		
FP	FalsePositive		
TN	TrueNegative		
FN	FalseNegative		
		Formula	
P	Precision	$\dfrac{TP}{TP+FP}$	
R or TPR	Recall/Sensivity/TruePositiveRate	$\dfrac{TP}{TP+FN}$	
TNR	TrueNegativeRate/Specificity Correctly clasified as negatives	$\dfrac{TN}{TN+FP}$	
FPR	FalsePositiveRate Incorrectly classified as positives	1-Specifity $\dfrac{FP}{FP+TN}$	
F1	F1-Score Harmonic mean	$\dfrac{TP}{TP+(FN+FP)/2}$	

Discuss the meaning of the rates.

Which rates should be high/low ?