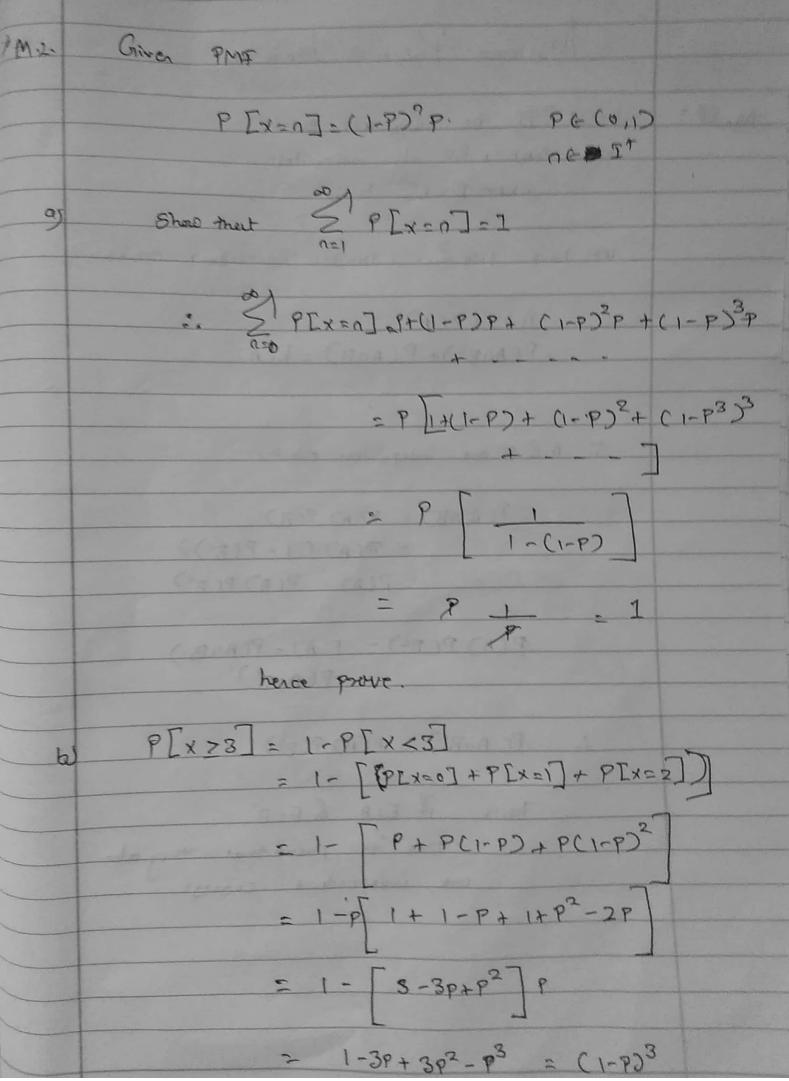
	Midterm Practice Exam
M. @ 1	let A & 13 be independent events.
	Show that E&F also independent
	wher EzA FzBc
	F-F-19 - And John Soften
	we have two fact about independent events.
Examp	PCASAP(A)=1
	PCAnBC)+PCAnB) = PCAD
98911	4309-0 409-116/19 30 18 18 18 18 18 18 18 18 18 18 18 18 18
	: A & B are independent event
	of a base mark mark mark
	PCA aBD = PCAD PCB)
	= P(A) (1-P(B°))
	= PCAD - PCAD PCBD
	PCAD PCBED = PCAD - PCADB)
	= PCAnBC)
	so PC AnBED = PCAD PCBED
	=x79 + [1=x]9 + [0-779] + 21
	herce if E=A & F=B°
	Comment of the lies of the selection
	ther its prove that they also
	are independent events.



e) 
$$n, s \in I^{+}$$

$$P[X \ge n+i][X \ge n] = P[X \ge i]$$

$$RHS = P[X \ge i] = \sum_{k=i}^{\infty} (1-P)^{k}P$$

$$= P(1-P)^{i}$$

$$= (1-P)^{i}$$

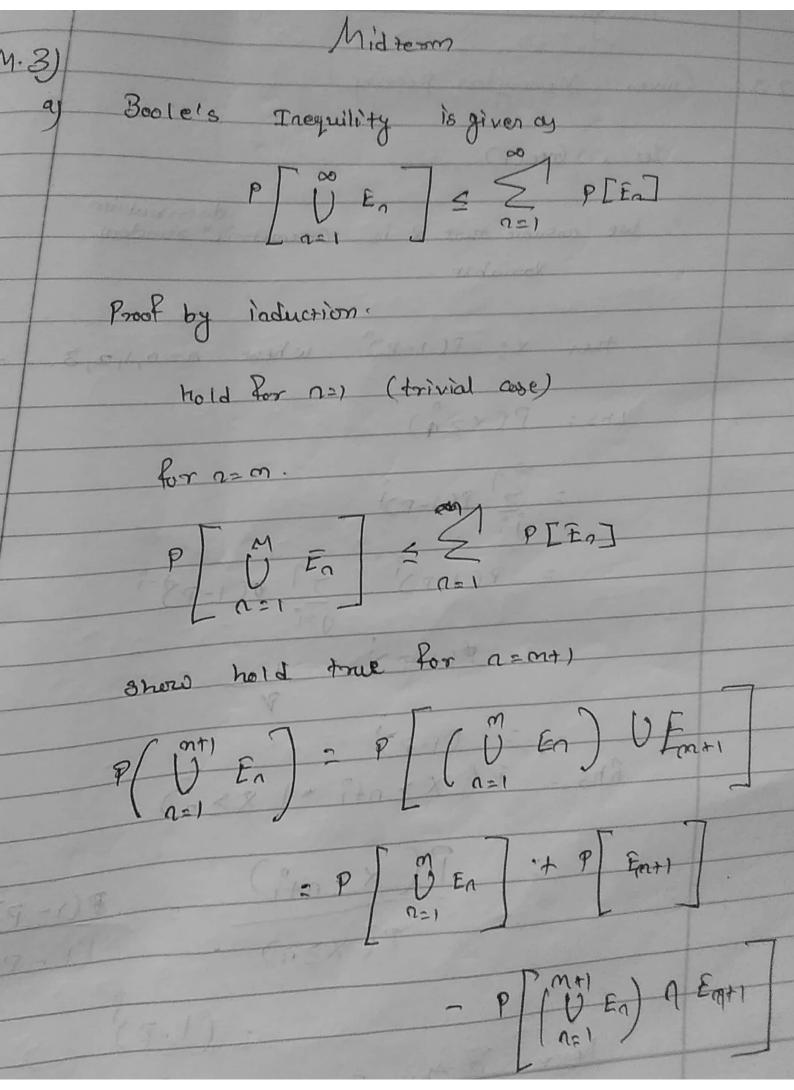
$$= P(X \ge i+n = 1 \times 2n)$$

$$= P(X \ge i+n, X \ge n)$$

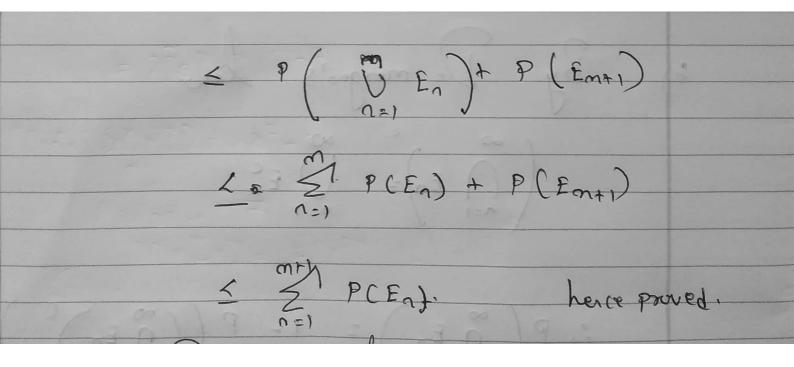
$$= P(X \ge i+n) = (1-P)^{i+n}$$

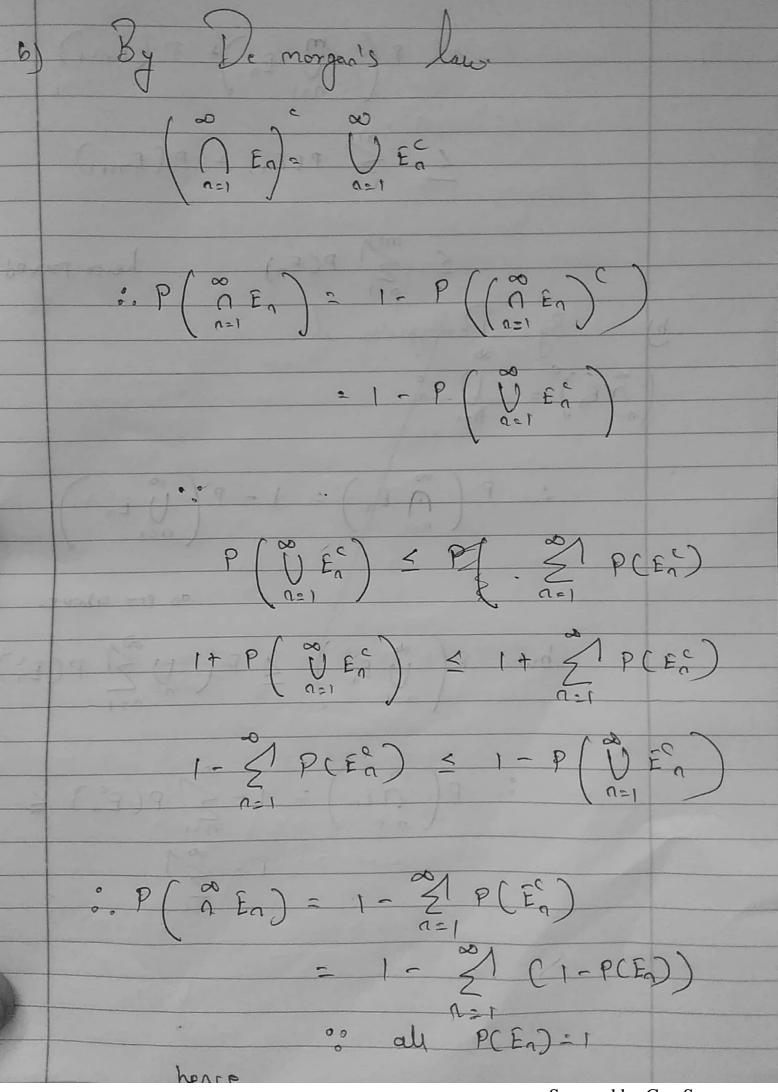
$$= P(X \ge n+n) = (1-P)^{i}$$

$$= RHS.$$

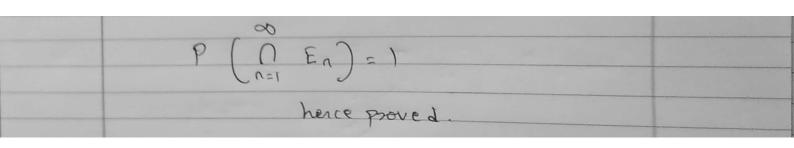


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M.4	
9)	There 6B Student
	then valeue Combination can be
	given as
	(68+1) = 82 Voique ways where 2
	so there are 33 ways to split students into
	Similarly
6)	If Capacity of class is 34
	5. Combination are
	34 31 7
	33 32 only two ways  32 33 to split class.
	32 33 to split class.
	31 34
	Which 34,31 Unique ways 2 & 4
	total.