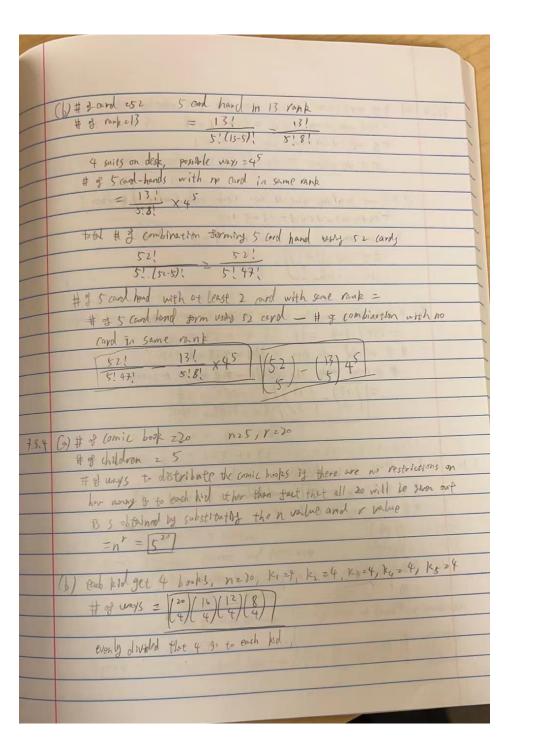
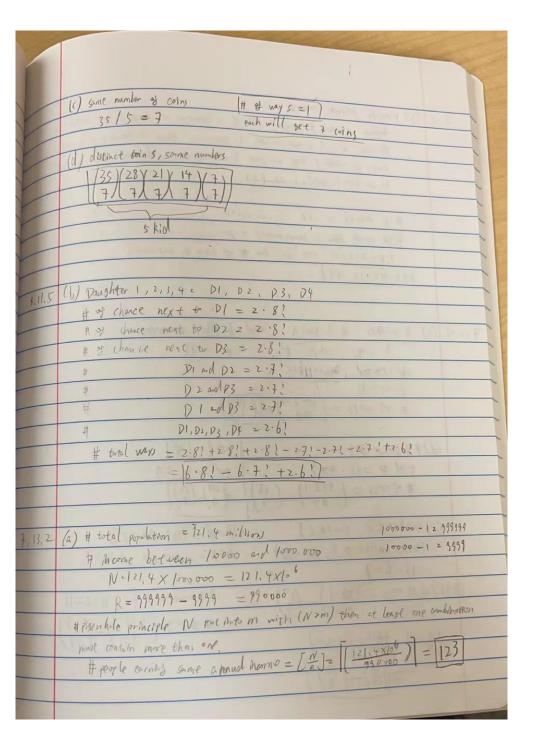


7.65 (a) 20 main dakes, 5 fixeds,
7.6.5 (a) 20 main duhes, 5 trends, the number of disperent possibles, for the waiter need to place all 5 duhes in
the centor of the table,
(10)
(b) the number of different possible for waiters must premember who ordered which dish as
the of to main dish which is
20.20.20.20.20 = [25]
(c) the number of different possible for waiters remember the elish, no two people will
order the same dish.
P(20,5)
7.7 2 (a) # of card = 52 (m =) - N!
7.7.2 (a) # of card = 5^2
$\frac{(52,5)}{(52,5)} = \frac{52!}{5!(525)!} = \frac{52!}{5!47!}$
(52,5/= 5!(525)! 5!47!
5-carol-hand =5
if 5 card hard combination formed without at least one
club = 52-13-39
381 381
$C(h_{17}) = C(34,5) = 39! \qquad 39! \qquad 5! 39! \qquad 5! 39!$
together, If of 5 co-ul name nove one cons
together, # of 5 card hand have one dus = (\$2! 39! (\$2) - (39) 5:47! \$!34! (5) 5
Statt Statt 5 5



7.9.4 (a) # of ways choose 25 ceins from piles, 4 piles in total
titl coin choose 25 din = 25+4-1=28
1 1 1 1 1 1 1 7 1
of solected with from 4 pills = 1 28! # 4 very solect 25 cin = (28) = 28 cs;
(b) # of way total ain that at least tooling chosen must be quarters
= 25+4-1-(5x1)=28-5=23
= 45+4-1-(5x1)-20 3
of selected coin from 4 pile = 4-1=3
of total - (23) - 23/ 3/ 3/ 201
(a) a street mate a surface of la market
(C) # & viay for 25 can that only 10 quarters, at most 10 quarters and le relected
= 25+3-1-10 = 17
of selected com from 4 ples 2 4-123
of total from the descult - # of wy for 10 quarter
$= \frac{728}{3} - \frac{17}{3} = \frac{28!}{3! \text{ s.f.}} = \frac{17!}{3! \text{ s.f.}}$
(3) (3) = 3! 45! 3! 14!
7.10.2 (an) 35 coins, 5 grandchildren,
of the coin to the grandchildren = 35+5-1=39
of chose way 2 5-1 =4
(39)
(b) # & distribution that all coin are distinct 535
39, 1
4!



7.13.3	(b) Pisenhole proviple converse =
	Suppose Lincolon of maps in let of a element to trasset set with k
	elements, in and is are positive, To stayment there is element y with
	toxet to which I may at love b elements from domain, then in must
	be at last k(b-1)+1 or kt1
	# onth = 12 in no 12
	that people both in some month = 20
	1. K=10-1=18 the less lan # of born in one month
	K+1= 12×19 +1
12.23.	(c) # snicker # \$ tuix and 6 other varieties 1 + 4 + 4 = 13
	J + V + V = 13
	Az stated, 2 snicker
	13-2=11
	# of nexs = (11+7-1) = (17)
	(d) # of treex 24 to (2°)
	(d) # \$ twix 2 + tol (2 (23)) tol # = 13 - 4= 9
	(d) #\$ tulx $= 3$
	8+1= (7) (7)
	(P) SNULLET ZZ, TWYX & 3 (And Z A) - IANB()
	First, snicker 22, tulx 24 - ANB = snicker 22, tulo = 3.
	13-6=7
100	
18/1	8) # of ways (7+8-1) = (13) A = snicker 7 2 , 13-221)
	8) # of ways (7+8-1) = (13) A = snicker 7 2, 13-221) \$\frac{18}{8-1} = \begin{pmatrix} 18 \\ 8-1 \end{pmatrix} = \begin{pmatrix} 18 \\ 18
	(AAB) = (A1- (AAB)
	1 103 (-1)
	= (3) - (3)