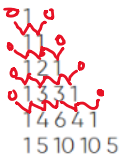
Lec13

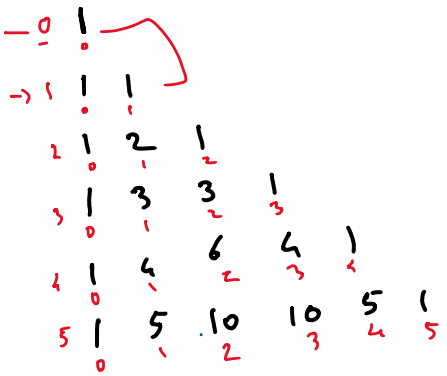
04 February 2026 10:55 AM



$^nC_2$

A B C D E

AB
AC
AD
AE



row col ^nC_R $= \frac{(n!)}{r!(n-r)!+1}$

num = 1

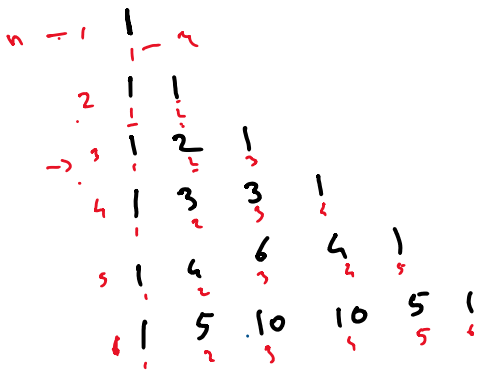
1
1

$\frac{1}{1\times1+1}$

$1+1$

$=2$

$\frac{1}{2}$



$\frac{n!}{r!(n-r)!+1}$ num = 1

$\frac{1}{1\times1}$ $\frac{2}{1\times1+1}$ $\frac{2}{2\times0+1}$

$\frac{1}{1}$ $\frac{2}{2}$ $\frac{2}{1}$

$=1$ $=2$

$\frac{6}{1\times2+1}$

2×1

$=3$

num = num * (row - col) / (col + 1)

Byte → 1 byte → 8 bit → -128 - 127

Short → 2 byte → 16 bit

int → 4 byte → 32 bit

long → 8 byte → 64 bit

size

5

- - - - - - ! = !

short → 2 byte → 32 bit
int → 4 byte → 32 bit
long → 8 byte → 64 bit

float
double

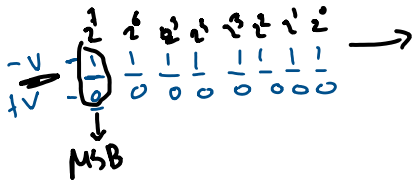
char
Boolean

2	5	-1
2	2	-0
2	1	-1
	0	

2^8

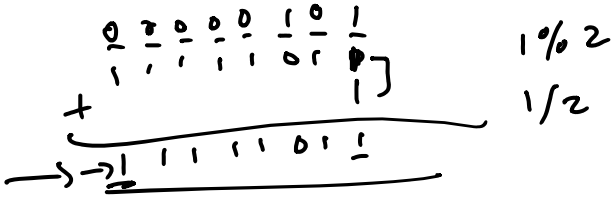
256

-v small +v largest



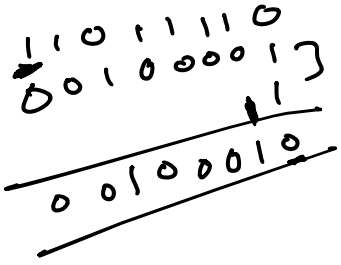
1s compliment

1 1 1 1 1 1 1 1
0 0 0 0 0 0 0 0



2	478	- 0
2	239	- 1
2	119	- 1
2	59	- 1
2	29	- 1
2	14	- 0
2	7	- 1
2	3	- 1
2	1	- 1
	0	

1 1 1 0 1 1 1 1 0



1. Widening Casting (Automatic/Implicit)

Order (Small to Large): byte → short → int → long → float → double

2. Narrowing Casting (Manual/Explicit)

Order (Large to Small): double → float → long → int → short → byte