→ literals

constant → doesn't change
Variable → may change
(or) identifier
Keyword → special meaning, reserved words.

Constants:

Primary — sec.

Int — Array
Real — string
char — pointers
structures
Uncons.

Rules: (Int) 4 bytes
Int: 1) atleast 1 digit
2) no decimal
3) zero, +ve, -ve (sign).

range -2147483648 to 2147483647 (4294967296).

0 → octal
0x/0X → Hexa decimal

Real
1) same
2) decimal
3) same.
4) exponent - mantissa
0.000342
3.420^{-4} / E (3.42×10^{-4}).
separated
+/ve/-ve
at least digit
+ve/-ve
$-3.4e38$ to $3.4e^{38}$

char

single alphabet, digit, symbol

'A', '5', '='

Vars:-

Results of calc, are stored here (in mem). to make retrieval & usage clear/easy, they are named.

Values keep on changing, so called variables.

Rules:

comb of alpha, num, underscores.

1st ↓ not 1st

decl:

```
int si;
float basic;
char code;
```

Keywords:- (32)

auto	double	int	struct
break	else	long	switch
case	enum	register	typedef
char	extern	return	union
continue	float	short	unsigned
default	for	signed	void
do	goto	sizeof	volatile
const	if	static	while

Structure of C

DOCUMENTATION BLOCK (comments, expln).

header files ↙ PREPROCESSOR DIRECTORIVE BLOCK

(fn def). DEFINITION BLOCK

GLOBAL DECLARATION BLOCK

main → 1st line of exe

{

var. decl

exec. insts

}

function block again.

—.

Rules:

end with ;

lower cases

comments: /* . */

//

main() → function

container for a set of statements.

```
int main()
{
    return 0;  → success.
}
```

Printf → can print (3, 3+2, c,
a+b * c-d);

scanf() →

scanf() → blank, tab, new line
↓ spacebar ↓ tab ↓ enter key.

Q) '3.15' ✗
35,550 ✗
3.25e2 ✓
'e Learning' ✗
4652 ✗

B'day ✗
int ✗
$hello ✗
_main() ✓
totalArea ✓
Variable name ✗

Instructions:
1) Type decln inst → to declare types of vars.
2) Arith "
3) control "

1) int i=10; → init
int bas; → decl.
float b = a+3.1, a=1.5; ✗
int a,b,c,d;
a=b=c=d=10; ✓
b = 1.99 + 2.4 * 1.44;
int a=b=c=d=10 ✗

2) Var (=) Var | consts
only one var
↓
Operands.

Value stored on left side