

D) ~~Worst case of $\log n$~~

for $i = 1 \text{ to } i \leq 30$, ~~with~~

void main () {

int n;

printf("Enter number : ");

scanf("%d", & n);

for (int i = 1; i \leq 30; i++) {

 if (i % n == 0)

 printf("%d\n", i);

 }

 }

 }

Day run = $n = 3$.

i	$i \leq 30$	if	$i \% 3 == 0$	if	O/P
1	$1 \leq 30$	✓	$1 \% 3 == 0$	x	1
2	$2 \leq 30$	✓	$2 \% 3 == 0$	x	2
3	$3 \leq 30$	✓	$3 \% 3 == 0$	✓	3.
4	$4 \leq 30$	✓	$4 \% 3 == 0$	x	4
5	$5 \leq 30$	✓	$5 \% 3 == 0$	x	5
6	$6 \leq 30$	✓	$6 \% 3 == 0$	✓	6.
7	$7 \leq 30$	✓	$7 \% 3 == 0$	x	7
8	$8 \leq 30$	✓	$8 \% 3 == 0$	x	x
9	$9 \leq 30$	✓	$9 \% 3 == 0$	✓	9.
10	$10 \leq 30$	✓	$10 \% 3 == 0$	x	x
11	$11 \leq 30$	✓	$11 \% 3 == 0$	x	x
12	$12 \leq 30$	✓	$12 \% 3 == 0$	✓	12
13	$13 \leq 30$	✓	$13 \% 3 == 0$	x	x
14	$14 \leq 30$	✓	$14 \% 3 == 0$	x	x
15	$15 \leq 30$	✓	$15 \% 3 == 0$	✓	15.
16	$16 \leq 30$	✓	$16 \% 3 == 0$	x	x
17	$17 \leq 30$	✓	$17 \% 3 == 0$	x	x
18	$18 \leq 30$	✓	$18 \% 3 == 0$	✓	18.
19	$19 \leq 30$	✓	$19 \% 3 == 0$	x	x
20	$20 \leq 30$	✓	$20 \% 3 == 0$	x	x.
21	$21 \leq 30$	✓	$21 \% 3 == 0$	✓	21
22	$22 \leq 30$	✓	$22 \% 3 == 0$	x	x.
23	$23 \leq 30$	✓	$23 \% 3 == 0$	x	x
24	$24 \leq 30$	✓	$24 \% 3 == 0$	✓	24.
25	$25 \leq 30$	✓	$25 \% 3 == 0$	x	25
26	$26 \leq 30$	✓	$26 \% 3 == 0$	x	x
27	$27 \leq 30$	✓	$27 \% 3 == 0$	✓	27.

28	$28 \leq 30$	✓	$28 \mod 3 = 0$	✗	X
29	$29 \leq 30$	✓	$29 \mod 3 \neq 0$	✗	X
30	$30 \leq 30$	✓	$30 \mod 3 = 0$	✓	30.
31	$31 \leq 30$	✗	✗	✗	Y.

3) void main() {

```
for (int i = 50; i <= 70; i++) {
    if (i % 2 == 0) {
```

```
        printf("%d\n", i);
```

3
3
3
3

Day 6

i	$i \leq 70$	$\text{if } i \% 2 == 0$	t1 f	OP
50	$50 \leq 70$	✓	$50 \% 2 == 0$	✓ 50.
51	$51 \leq 70$	✓	$51 \% 2 == 0$	✗
52	$52 \leq 70$	✓	$52 \% 2 == 0$	✓ 52
53	$53 \leq 70$	✓	$53 \% 2 == 0$	✗
54	$54 \leq 70$	✓	$54 \% 2 == 0$	✓ 54
55	$55 \leq 70$	✓	$55 \% 2 == 0$	✗
56	$56 \leq 70$	✓	$56 \% 2 == 0$	✓ 56.
57	$57 \leq 70$	✓	$57 \% 2 == 0$	✗
58	$58 \leq 70$	✓	$58 \% 2 == 0$	✓ 58.
59	$59 \leq 70$	✓	$59 \% 2 == 0$	✗
60	$60 \leq 70$	✓	$60 \% 2 == 0$	✗ 60
61	$61 \leq 70$	✓	$61 \% 2 == 0$	✗
62	$62 \leq 70$	✓	$62 \% 2 == 0$	✓ 62.
63	$63 \leq 70$	✓	$63 \% 2 == 0$	✗
64	$64 \leq 70$	✓	$64 \% 2 == 0$	✓ 64.
65	$65 \leq 70$	✓	$65 \% 2 == 0$	✗.
66	$66 \leq 70$	✓	$66 \% 2 == 0$	✓ 66.
67	$67 \leq 70$	✓	$67 \% 2 == 0$	✗
68	$68 \leq 70$	✓	$68 \% 2 == 0$	✓ 68.
69	$69 \leq 70$	✓	$69 \% 2 == 0$	✗.
70	$70 \leq 70$	✓	$70 \% 2 == 0$	✓ 70.
71	$71 \leq 70$	✗	✗	✗

4) void main () {
 for (int i = 1; ~~i <= 50~~; i++) {
 if (50 % i == 0) {
 printf("%d\\n", i);
 }
 }
}

Day over.

Day	over.
1	$i \leq 50$
2	$i \leq 50$
3	$i \leq 50$
4	$i \leq 50$
5	$i \leq 50$
6	$i \leq 50$
7	$i \leq 50$
8	$i \leq 50$
9	$i \leq 50$
10	$i \leq 50$
11	$i \leq 50$
12	$i \leq 50$
13	$i \leq 50$
14	$i \leq 50$
15	$i \leq 50$
16	$i \leq 50$
17	$i \leq 50$
18	$i \leq 50$
19	$i \leq 50$
20	$i \leq 50$
21	$i \leq 50$
22	$i \leq 50$
23	$i \leq 50$
24	$i \leq 50$
25	$i \leq 50$
26	$i \leq 50$
27	$i \leq 50$
28	$i \leq 50$
29	$i \leq 50$
30	$i \leq 50$
31	$i \leq 50$
32	$i \leq 50$
33	$i \leq 50$
34	$i \leq 50$
35	$i \leq 50$
36	$i \leq 50$
37	$i \leq 50$
38	$i \leq 50$
39	$i \leq 50$
40	$i \leq 50$
41	$i \leq 50$
42	$i \leq 50$
43	$i \leq 50$
44	$i \leq 50$
45	$i \leq 50$
46	$i \leq 50$
47	$i \leq 50$

t/F

50% i == 0
 50% 1 == 0
 50% 2 == 0
 50% 3 == 0
 50% 4 == 0
 50% 5 == 0
 50% 6 == 0
 50% 7 == 0
 50% 8 == 0
 50% 9 == 0
 50% 10 == 0
 50% 11 == 0
 50% 12 == 0
 50% 13 == 0
 50% 14 == 0
 50% 15 == 0
 50% 16 == 0
 50% 17 == 0
 50% 18 == 0
 50% 19 == 0
 50% 20 == 0
 50% 21 == 0
 50% 22 == 0
 50% 23 == 0
 50% 24 == 0
 50% 25 == 0
 50% 26 == 0
 50% 27 == 0
 50% 28 == 0
 50% 29 == 0
 50% 30 == 0
 50% 31 == 0
 50% 32 == 0
 50% 33 == 0
 50% 34 == 0
 50% 35 == 0
 50% 36 == 0
 50% 37 == 0
 50% 38 == 0
 50% 39 == 0
 50% 40 == 0
 50% 41 == 0
 50% 42 == 0
 50% 43 == 0
 50% 44 == 0
 50% 45 == 0
 50% 46 == 0
 50% 47 == 0

t/F

O/P.
 1
 2 X X
 3 X X
 4 X X
 5 X X
 6 X X X X
 7 X X X X
 8 X X X X
 9 X X X X
 10 X X X X
 11 X X X X
 12 X X X X
 13 X X X X
 14 X X X X
 15 X X X X
 16 X X X X
 17 X X X X
 18 X X X X
 19 X X X X
 20 X X X X
 21 X X X X
 22 X X X X
 23 X X X X
 24 X X X X
 25 X X X X
 26 X X X X
 27 X X X X
 28 X X X X
 29 X X X X
 30 X X X X
 31 X X X X
 32 X X X X
 33 X X X X
 34 X X X X
 35 X X X X
 36 X X X X
 37 X X X X
 38 X X X X
 39 X X X X
 40 X X X X
 41 X X X X
 42 X X X X
 43 X X X X
 44 X X X X
 45 X X X X
 46 X X X X
 47 X X X X

48	$48 \leq 50$	✓	$50 \cdot 148 = 20$	X	X
49	$49 \leq 50$	✓	$50 \cdot 149 = 20$	X	50
50	$50 \leq 50$	✓	$50 \cdot 150 = 0$	✓	X
51	$51 \leq 50$	X	X	X	

2) void main () {

for (int i = 20; i ≤ 40; i++) {

if ($y \cdot 2 != 0$) {

printf ("%d\n", i);

3. 3

Day 8 Ques.

i	$i \leq 40$	t/F	$y \cdot 2 != 0$	t/F	O/P.
20	$20 \leq 40$	✓	$20 \cdot 2 != 0$	X	X.
21	$21 \leq 40$	✓	$21 \cdot 2 != 0$	✓	21
22	$22 \leq 40$	✓	$22 \cdot 2 != 0$	X	X.
23	$23 \leq 40$	✓	$23 \cdot 2 != 0$	✓	23.
24	$24 \leq 40$	✓	$24 \cdot 2 != 0$	X	X.
25	$25 \leq 40$	✓	$25 \cdot 2 != 0$	✓	25.
26	$26 \leq 40$	✓	$26 \cdot 2 != 0$	X	X.
27	$27 \leq 40$	✓	$27 \cdot 2 != 0$	✓	27
28	$28 \leq 40$	✓	$28 \cdot 2 != 0$	X	X.
29	$29 \leq 40$	✓	$29 \cdot 2 != 0$	X	X.
30	$30 \leq 50$	✓	$30 \cdot 2 != 0$	✓	31
31	$31 \leq 50$	✓	$31 \cdot 2 != 0$	X	X.
32	$32 \leq 50$	✓	$32 \cdot 2 != 0$	✓	33
33	$33 \leq 50$	✓	$33 \cdot 2 != 0$	X	X.
34	$34 \leq 50$	✓	$34 \cdot 2 != 0$	✓	34
35	$35 \leq 50$	✓	$35 \cdot 2 != 0$	X	35

3) void main () {

for (int i = 1; i <= 128; i++) {

printf ("%d = %c\n", i, i);

3.

3.

Day sum :

i	$i \leq 128$	t/F	$y \cdot d = y \cdot c$
1	$1 \leq 128$	✓	$1 = \boxed{\text{A}}$
2	$2 \leq 128$	✓	$2 = \boxed{\text{B}}$
3	$3 \leq 128$	✓	$3 = \boxed{\text{C}}$

4	$4 \leq 128$	✓	4	\div	□
5	$5 \leq 128$	✓	5	=	□
6	$6 \leq 128$	✓	6	=	□
7	$7 \leq 128$	✓	7	=	□
8	$8 \leq 128$	✓	8	=	□
9	$9 \leq 128$	✓	9	=	□
10	$10 \leq 128$	✓	10	=	□
11	$11 \leq 128$	✓	11	=	□
12	$12 \leq 128$	✓	12	=	□
13	$13 \leq 128$	✓	13	=	□
14	$14 \leq 128$	✓	14	=	□
15	$15 \leq 128$	✓	15	=	□
16	$16 \leq 128$	✓	16	=	□
17	$17 \leq 128$	✓	17	=	□
18	$18 \leq 128$	✓	18	>	□
19	$19 \leq 128$	✓	19	=	□
20	$20 \leq 128$	✓	20	=	□
21	$21 \leq 128$	✓	21	=	□
22	$22 \leq 128$	✓	22	=	□
23	$23 \leq 128$	✓	23	=	□
24	$24 \leq 128$	✓	24	=	□
25	$25 \leq 128$	✓	25	=	□
26	$26 \leq 128$	✓	26	=	□
27	$27 \leq 128$	✓	27	=	□
28	$28 \leq 128$	✓	28	=	□
29	$29 \leq 128$	✓	29	=	□
30	$30 \leq 128$	✓	30	=	□
31	$31 \leq 128$	✓	31	=	□
32	$32 \leq 128$	✓	32	=	!
33	$33 \leq 128$	✓	33	=	!
34	$34 \leq 128$	✓	34	=	!!
35	$35 \leq 128$	✓	35	=	#
36	$36 \leq 128$	✓	36	=	§
37	$37 \leq 128$	✓	37	=	¥
38	$38 \leq 128$	✓	38	=	€
39	$39 \leq 128$	✓	39	=	1
40	$40 \leq 128$	✓	40	=	(
41	$41 \leq 128$	✓	41	=)
42	$42 \leq 128$	✓	42	=	*
43	$43 \leq 128$	✓	43	=	+
44	$44 \leq 128$	✓	44	=	,
45	$45 \leq 128$	✓	45	=	-
46	$46 \leq 128$	✓	46	=	.
47	$47 \leq 128$	✓	47	=	1
48	$48 \leq 128$	✓	48	=	0
49	$49 \leq 128$	✓	49	=	1
50	$50 \leq 128$	✓	50	=	2
51	$51 \leq 128$	✓	51	=	3
52	$52 \leq 128$	✓	52	=	4
53	$53 \leq 128$	✓	53	=	5
54	$54 \leq 128$	✓	54	=	6

106=j

55	55 \leq 128	✓	55 = f	105	105 \leq 128	✓	
56	56 \leq 128	✓	56 = g	107	107 \leq 128	✓	107=k
57	57 \leq 128	✓	57 = h	108	108 \leq 128	✓	108=l
58	58 \leq 128	✓	58 = i	109	109 \leq 128	✓	109=m
59	59 \leq 128	✓	59 = j	110	110 \leq 128	✓	110=n
60	60 \leq 128	✓	60 = k	111	111 \leq 128	✓	111=o
61	61 \leq 128	✓	61 = l	112	112 \leq 128	✗	112=p
62	62 \leq 128	✓	62 = m	113	113 \leq 128	✓	113=q
63	63 \leq 128	✓	63 = n	114	114 \leq 128	✗	114=r
64	64 \leq 128	✓	64 = o	115	115 \leq 128	✓	115=s
65	65 \leq 128	✓	65 = p	116	116 \leq 128	✓	116=t
66	66 \leq 128	✓	66 = q	117	117 \leq 128	✓	117=u
67	67 \leq 128	✓	67 = r	118	118 \leq 128	✓	118=v
68	68 \leq 128	✓	68 = s	119	119 \leq 128	✓	119=w
69	69 \leq 128	✓	69 = t	120	120 \leq 128	✓	120=x
70	70 \leq 128	✓	70 = f	121	121 \leq 128	✓	121=y
71	71 \leq 128	✓	71 = g	122	122 \leq 128	✓	122=z
72	72 \leq 128	✓	72 = h	123	123 \leq 128	✓	123=g
73	73 \leq 128	✓	73 = i	124	124 \leq 128	✓	124=l
74	74 \leq 128	✓	74 = j	125	125 \leq 128	✓	125=g
75	75 \leq 128	✓	75 = k	126	126 \leq 128	✓	126=z
76	76 \leq 128	✓	76 = l	127	127 \leq 128	✓	127=f
77	77 \leq 128	✓	77 = m	128	128 \leq 128	✓	128=d
78	78 \leq 128	✓	78 = n	129	129 \leq 129	X X	
79	79 \leq 128	✓	79 = o				
80	80 \leq 128	✓	80 = p				
81	81 \leq 128	✓	81 = q				
82	82 \leq 128	✓	82 = r				
83	83 \leq 128	✓	83 = s				
84	84 \leq 128	✓	84 = t				
85	85 \leq 128	✓	85 = u				
86	86 \leq 128	✓	86 = v				
87	87 \leq 128	✓	87 = w				
88	88 \leq 128	✓	88 = x				
89	89 \leq 128	✓	89 = y				
90	90 \leq 128	✓	90 = z				
91	91 \leq 128	✓	91 = {				
92	92 \leq 128	✓	92 = \				
93	93 \leq 128	✗	93 =]				
94	94 \leq 128	✓	94 = ^				
95	95 \leq 128	✓	95 = -				
96	96 \leq 128	✓	96 = .				
97	97 \leq 128	✓	97 = o.				
98	98 \leq 128	✓	98 = b.				
99	99 \leq 128	✓	99 = c				
100	100 \leq 128	✓	100 = d.				
101	101 \leq 128	✓	-101 = e.				
102	102 \leq 128	✓	102 = f.				
103	103 \leq 128	✓	103 = g.				
104	104 \leq 128	✓	104 = h.				
105	105 \leq 128	✓	105 = i.				

6) Void main() {

int i, f; //

printf("Upper case = %c\n");

for (i = 65; i <= 90; i++) {
 printf("%c\n", i);

}

printf("Lower case: %c\n");

for (f = 97; f <= 122; f++) {
 printf("%c\n", f);

}

}

Day 2: Upper case

i	$i \leq 90$	t/F	O/P
65	$65 \leq 90$	✓	A
66	$66 \leq 90$	✓	B
67	$67 \leq 90$	✓	C
68	$68 \leq 90$	✓	D
69	$69 \leq 90$	✓	E
70	$70 \leq 90$	✓	F
71	$71 \leq 90$	✓	G
72	$72 \leq 90$	✓	H
73	$73 \leq 90$	✓	I
74	$74 \leq 90$	✓	J
75	$75 \leq 90$	✓	K
76	$76 \leq 90$	✓	L
77	$77 \leq 90$	✓	M
78	$78 \leq 90$	✓	N
79	$79 \leq 90$	✓	O
80	$80 \leq 90$	✓	P
81	$81 \leq 90$	✓	Q
82	$82 \leq 90$	✓	R
83	$83 \leq 90$	✓	S
84	$84 \leq 90$	✓	T
85	$85 \leq 90$	✓	U
86	$86 \leq 90$	✓	V
87	$87 \leq 90$	✓	W
88	$88 \leq 90$	✓	X
89	$89 \leq 90$	✓	Y
90	$90 \leq 90$	✓	Z
91	$91 \leq 90$	X	X

Day 2: Lower case

i	$i \leq 122$	t/F	O/P
97	$97 \leq 122$	✓	a
98	$98 \leq 122$	✓	b
99	$99 \leq 122$	✓	c
100	$100 \leq 122$	✓	d.
101	$101 \leq 122$	✓	e.
102	$102 \leq 122$	✓	f
103	$103 \leq 122$	✓	g.
104	$104 \leq 122$	✓	h.
105	$105 \leq 122$	✓	i.
106	$106 \leq 122$	✓	j.
107	$107 \leq 122$	✓	k.
108	$108 \leq 122$	✓	l.
109	$109 \leq 122$	✓	m.
110	$110 \leq 122$	✓	n.
111	$111 \leq 122$	✓	o
112	$112 \leq 122$	✓	p
113	$113 \leq 122$	✓	q
114	$114 \leq 122$	✓	r
115	$115 \leq 122$	✓	s
116	$116 \leq 122$	✓	t
117	$117 \leq 122$	✓	u
118	$118 \leq 122$	✓	v
119	$119 \leq 122$	✓	w
120	$120 \leq 122$	✓	x
121	$121 \leq 122$	✓	y
122	$122 \leq 122$	✓	z
121	$121 \leq 122$	X	X

7) void main() {
 for (int i = 1; i <= 60; i++) {
 if (i % 6 == 0)
 printf("%d\n", i);
 } } } }

i	$i \leq 60$	t/F	$i \% 6 == 0$	t/F	OP
1	$1 \leq 60$	✓	$1 \% 6 == 0$	X	X
2	$2 \leq 60$	✓	$2 \% 6 == 0$	X	X
3	$3 \leq 60$	✓	$3 \% 6 == 0$	X	X
4	$4 \leq 60$	✓	$4 \% 6 == 0$	X	X
5	$5 \leq 60$	✓	$5 \% 6 == 0$	✓	6
6	$6 \leq 60$	✓	$6 \% 6 == 0$	X	X
7	$7 \leq 60$	✓	$7 \% 6 == 0$	X	X
8	$8 \leq 60$	✓	$8 \% 6 == 0$	X	X
9	$9 \leq 60$	✓	$9 \% 6 == 0$	X	X
10	$10 \leq 60$	✓	$10 \% 6 == 0$	X	X
11	$11 \leq 60$	✓	$11 \% 6 == 0$	✓	12
12	$12 \leq 60$	✓	$12 \% 6 == 0$	X	X
13	$13 \leq 60$	✓	$13 \% 6 == 0$	X	X
14	$14 \leq 60$	✓	$14 \% 6 == 0$	X	X
15	$15 \leq 60$	✓	$15 \% 6 == 0$	X	X
16	$16 \leq 60$	✓	$16 \% 6 == 0$	✓	18
17	$17 \leq 60$	✓	$17 \% 6 == 0$	X	X
18	$18 \leq 60$	✓	$18 \% 6 == 0$	X	X
19	$19 \leq 60$	✓	$19 \% 6 == 0$	X	X
20	$20 \leq 60$	✓	$20 \% 6 == 0$	X	X
21	$21 \leq 60$	✓	$21 \% 6 == 0$	X	X
22	$22 \leq 60$	✓	$22 \% 6 == 0$	X	24
23	$23 \leq 60$	✓	$23 \% 6 == 0$	X	X
24	$24 \leq 60$	✓	$24 \% 6 == 0$	X	X
25	$25 \leq 60$	✓	$25 \% 6 == 0$	X	X
26	$26 \leq 60$	✓	$26 \% 6 == 0$	X	X
27	$27 \leq 60$	✓	$27 \% 6 == 0$	X	X
28	$28 \leq 60$	✓	$28 \% 6 == 0$	X	X
29	$29 \leq 60$	✓	$29 \% 6 == 0$	X	X
30	$30 \leq 60$	✓	$30 \% 6 == 0$	✓	30
31	$31 \leq 60$	✓	$31 \% 6 == 0$	X	X
32	$32 \leq 60$	✓	$32 \% 6 == 0$	X	X
33	$33 \leq 60$	✓	$33 \% 6 == 0$	X	X

34	$34 \leq 60$	✓	$34 \gamma \cdot 6 = 20$	X	
35	$35 \leq 60$	✓	$35 \gamma \cdot 6 = 0$	X	X
36	$36 \leq 60$	✓	$36 \gamma \cdot 6 = 0$	✓	36
37	$37 \leq 60$	✓	$37 \gamma \cdot 6 = 0$	X	X
38	$38 \leq 60$	✓	$38 \gamma \cdot 6 = 0$	X	X
39	$39 \leq 60$	✓	$39 \gamma \cdot 6 = 0$	X	X
40	$40 \leq 60$	✓	$40 \gamma \cdot 6 = 0$	X	X
41	$41 \leq 60$	✓	$41 \gamma \cdot 6 = 0$	X	
42	$42 \leq 60$	✓	$42 \gamma \cdot 6 = 0$	✓	a 2
43	$43 \leq 60$	✓	$43 \gamma \cdot 6 = 0$	X	X
44	$44 \leq 60$	✓	$44 \gamma \cdot 6 = 0$	X	X
45	$45 \leq 60$	✓	$45 \gamma \cdot 6 = 0$	X	X
46	$46 \leq 60$	✓	$46 \gamma \cdot 6 = 0$	X	X
47	$47 \leq 60$	✗	$47 \gamma \cdot 6 = 0$		
48	$48 \leq 60$	✓	$48 \gamma \cdot 6 = 0$	✓	48
49	$49 \leq 60$	✓	$49 \gamma \cdot 6 = 0$	X	X
50	$50 \leq 60$	✓	$50 \gamma \cdot 6 = 0$	X	X
51	$51 \leq 60$	✗	$51 \gamma \cdot 6 = 0$	X	X
52	$52 \leq 60$	✓	$52 \gamma \cdot 6 = 0$	X	X
53	$53 \leq 60$	✓	$53 \gamma \cdot 6 = 0$	X	X
54	$54 \leq 60$	✓	$54 \gamma \cdot 6 = 0$	✓	5 4
55	$55 \leq 60$	✓	$55 \gamma \cdot 6 = 0$	X	X
56	$56 \leq 60$	✓	$56 \gamma \cdot 6 = 0$	X	X
57	$57 \leq 60$	✓	$57 \gamma \cdot 6 = 0$	X	X
58	$58 \leq 60$	✓	$58 \gamma \cdot 6 = 0$	X	X
59	$59 \leq 60$	✓	$59 \gamma \cdot 6 = 0$	X	X
60	$60 \leq 60$	✓	$60 \gamma \cdot 6 = 0$	✓	6 0

g) void main() {

```
for (char i = 'Y'; i >= 'J'; i--) {
    printf("%c\n", i);
}
```

}

Day sun:

i	$i \geq j$
y	$y \geq j$
x	$x \geq j$
w	$w \geq j$
v	$v \geq j$
t	$t \geq j$
s	$s \geq j$
r	$r \geq j$
q	$q \geq j$
p	$p \geq j$
o	$o \geq j$
n	$n \geq j$

t	f	0/p.
m	✓	
d	✓	
j	✓	
k	✓	
l	✓	
z	✓	
c	✓	
u	✓	
e	✓	
g	✓	
h	✓	
i	✓	
o	✓	
p	✓	
q	✓	
r	✓	
s	✓	
t	✓	
u	✓	
v	✓	
w	✓	
x	✓	
y	✓	
z	✓	

i	$i \geq j$
m	$m \geq j$
d	$d \geq j$
j	$j \geq j$
k	$k \geq j$
l	$l \geq j$
z	$z \geq j$
c	$c \geq j$
u	$u \geq j$
e	$e \geq j$
g	$g \geq j$
h	$h \geq j$
i	$i \geq j$
o	$o \geq j$
p	$p \geq j$
q	$q \geq j$
r	$r \geq j$
s	$s \geq j$
t	$t \geq j$
u	$u \geq j$
v	$v \geq j$
w	$w \geq j$
x	$x \geq j$
y	$y \geq j$
z	$z \geq j$

t	f
m	✓
d	✓
j	✓
k	✓
l	✓
z	✓
c	✓
u	✓
e	✓
g	✓
h	✓
i	✓
o	✓
p	✓
q	✓
r	✓
s	✓
t	✓
u	✓
v	✓
w	✓
x	✓
y	✓
z	✓

o/p	B
R	K
Q	J
P	I
O	H
N	G
M	F
D	E
J	D
K	C
L	B
Z	A
C	Z
U	C
E	B
G	A
H	Z
I	Y
O	X
P	V
Q	W
R	U
S	T
T	S
U	R
V	Q
W	P
X	N
Y	M
Z	L

a) void main() {

for (int i = 31; i >= 16; i++) {

i = i - 1;
printf("%d\n", i);

} }

31	i = 31	if	i = i - 1	0 / P
30	i = 30	if	i = 30 - 1	30
29	i = 29	if	i = 29 - 1	28
28	i = 28	if	i = 28 - 1	26
27	i = 27	if	i = 27 - 1	24.

31	i >= 16	if	i = i - 1	0 / P
30	31 >= 16	if	i = 31 - 1	30
29	29 >= 16	if	i = 29 - 1	28
28	27 >= 16	if	i = 27 - 1	26
27	25 >= 16	if	i = 25 - 1	24.

23	$23 \geq 16$	✓	$i = 23 - 1$	22
21	$21 \geq 16$	✓	$i = 21 - 1$	20
19	$19 \geq 16$	✓	$i = 19 - 1$	18
17	$17 \geq 16$	✓	$i = 17 - 1$	16.
15	$15 \geq 16$	✗	$i = 16 - 1$ X	X

10) void main() {

```
for (int i = 1; i <= 65; i++)
    if (65 - i == 0)
        printf(" %d\n", i);
```

3 3 3

i	$i <= 65$ & $65 - i = 0$	if	Output
1	$1 <= 65$ ✓	$65 - 1 = 0$	✓
2	$2 <= 65$ ✓	$65 - 2 = 0$	X
3	$3 <= 65$ ✓	$65 - 3 = 0$	X
4	$4 <= 65$ ✓	$65 - 4 = 0$	X
5	$5 <= 65$ ✓	$65 - 5 = 0$	✓
6	$6 <= 65$ ✓	$65 - 6 = 0$	X
7	$7 <= 65$ ✓	$65 - 7 = 0$	X
8	$8 <= 65$ ✓	$65 - 8 = 0$	X
9	$9 <= 65$ ✓	$65 - 9 = 0$	X
10	$10 <= 65$ ✓	$65 - 10 = 0$	X
11	$11 <= 65$ ✓	$65 - 11 = 0$	X
12	$12 <= 65$ ✓	$65 - 12 = 0$	✓
13	$13 <= 65$ ✓	$65 - 13 = 0$	X
14	$14 <= 65$ ✓	$65 - 14 = 0$	X
15	$15 <= 65$ ✓	$65 - 15 = 0$	X
16	$16 <= 65$ ✓	$65 - 16 = 0$	X
17	$17 <= 65$ ✓	$65 - 17 = 0$	X
18	$18 <= 65$ ✓	$65 - 18 = 0$	X
19	$19 <= 65$ ✓	$65 - 19 = 0$	X
20	$20 <= 65$ ✓	$65 - 20 = 0$	X
21	$21 <= 65$ ✓	$65 - 21 = 0$	X
22	$22 <= 65$ ✓	$65 - 22 = 0$	X
23	$23 <= 65$ ✓	$65 - 23 = 0$	X
24	$24 <= 65$ ✓	$65 - 24 = 0$	X
25	$25 <= 65$ ✓	$65 - 25 = 0$	X
26	$26 <= 65$ ✓	$65 - 26 = 0$	X
27	$27 <= 65$ ✓	$65 - 27 = 0$	X
28	$28 <= 65$ ✓	$65 - 28 = 0$	X
29	$29 <= 65$ ✓	$65 - 29 = 0$	X
30	$30 <= 65$ ✓	$65 - 30 = 0$	X
31	$31 <= 65$ ✓	$65 - 31 = 0$	X
32	$32 <= 65$ ✓	$65 - 32 = 0$	X

33				
34	$B_3 \leq B_5$	/	$65 \gamma \cdot 33 = 0$	X
35	$34 \leq 65$	/	$65 \gamma \cdot 34 = 0$	X
36	$35 \leq 65$	/	$65 \gamma \cdot 35 = 0$	X
37	$36 \leq 65$	/	$65 \gamma \cdot 36 = 0$	X
38	$B_2 \leq 65$	/	$65 \gamma \cdot 37 = 0$	X
39	$38 \leq 65$	/	$B_3 \gamma \cdot 38 = 0$	X
40	$39 \leq 65$	/	$65 \gamma \cdot 39 = 0$	X
41	$40 \leq 65$	/	$65 \gamma \cdot 40 = 0$	X
42	$41 \leq 65$	/	$65 \gamma \cdot 41 = 0$	X
43	$42 \leq 65$	/	$65 \gamma \cdot 42 = 0$	X
44	$43 \leq 65$	/	$65 \gamma \cdot 43 = 0$	X
45	$44 \leq 65$	/	$65 \gamma \cdot 44 = 0$	X
46	$45 \leq 65$	/	$65 \gamma \cdot 45 = 0$	X
47	$46 \leq 65$	/	$65 \gamma \cdot 46 = 0$	X
48	$47 \leq 65$	/	$65 \gamma \cdot 47 = 0$	X
49	$48 \leq 65$	/	$65 \gamma \cdot 48 = 0$	X
50	$49 \leq 65$	/	$65 \gamma \cdot 49 = 0$	X
51	$50 \leq 65$	/	$B_2 \gamma \cdot 50 = 0$	X
52	$51 \leq 65$	/	$B_3 \gamma \cdot 50 = 0$	X
53	$52 \leq 65$	/	$65 \gamma \cdot 51 = 0$	X
54	$53 \leq 65$	/	$65 \gamma \cdot 52 = 0$	X
55	$54 \leq 65$	/	$65 \gamma \cdot 53 = 0$	X
56	$55 \leq 65$	/	$65 \gamma \cdot 54 = 0$	X
57	$56 \leq 65$	/	$65 \gamma \cdot 55 = 0$	X
58	$57 \leq 65$	/	$65 \gamma \cdot 56 = 0$	X
59	$58 \leq 65$	/	$65 \gamma \cdot 57 = 0$	X
60	$59 \leq 65$	/	$65 \gamma \cdot 58 = 0$	X
61	$60 \leq 65$	/	$B_2 \gamma \cdot 59 = 0$	X
62	$61 \leq 65$	/	$B_3 \gamma \cdot 60 = 0$	X
63	$62 \leq 65$	/	$65 \gamma \cdot 61 = 0$	X
64	$63 \leq 65$	/	$65 \gamma \cdot 62 = 0$	X
65	$64 \leq 65$	/	$65 \gamma \cdot 63 = 0$	X
	$B_5 \leq 64$	/	$65 \gamma \cdot 64 = 0$	X
			$65 \gamma \cdot 60 = 0$	65