

1.

The output is:

```
1 2 4 8 16 32 64 128
```

2.

main.c	Run	Output
<pre>1 #include <stdio.h> 2 int main(){ 3 int i; 4 5 i = 9; 6 7 while (i < 10) { 8 printf ("a\n"); 9 i += 1; 10 } 11 for (; i < 10;) { 12 printf ("b\n"); 13 i += 1; 14 } 15 do { 16 printf ("c\n"); 17 i += 1; 18 } while (i < 10); 19 }</pre>		<pre>/tmp/0noSnja0dg.o a c</pre>

The for loop (b) is not equivalent to the other two.

3.

main.c	Run	Output
<pre>1 #include <stdio.h> 2 3 int main() { 4 5 int i; 6 7 // i < 8 because 2^8 is 256 8 for(i=0; i<8; i++) { 9 10 // 1 << i (x << y) is equals to 1 * 2^i (x * 2^y) 11 printf("%d ", 1 << i); 12 } 13 return 0; 14 }</pre>		<pre>/tmp/0noSnja0dg.o 1 2 4 8 16 32 64 128</pre>

4.

```
1 #include <stdio.h>
2 int main(){
3     int i, n;
4
5     i = 0;
6     n = 2;
7
8     printf (" TABLE of POWER OF 2\n");
9     printf ("n      2 to the n\n");
10
11
12 while (n <= 1024){
13     printf ("%d      %d\n",i,n);
14     i += 1;
15     n = pow ( 2 , i);
16 }
17 }
```

/tmp/I6WH9TEU60.o
TABLE of POWER OF 2
n 2 to the n
0 2
1 2
2 4
3 8
4 16
5 32
6 64
7 128
8 256
9 512
10 1024

5.

```
1 #include<stdio.h>
2
3 int main(){
4     int i,monthdays;
5     int dow;
6     printf("Enter the number of days in a month: ");
7     scanf("%d",&monthdays);
8     printf ("\n");
9     printf("The day of the week on which the month begins: ");
10    scanf("%d",&dow);
11    printf ("\n");
12
13    // spacing
14    for(i=1;i<dow;i++)
15        printf(" ");
16    // calendar
17    for(i=1;i<=monthdays;i++){
18        printf("%3d",i);
19        if((dow+i-1)%7==0)
20            printf("\n");
21    }
22    return 0;
23 }
```