1.
(1) Initialising variables before using them
(2) The values of variables should match variable names.

2. Write a C program to input eight integer numbers into an array named amps. After all the numbers have been input, display the numbers and calculate and display their average.

```
#include <stdio.h>
int main(void) {
int i, amps[8], total;
for (i = 0; i < 8; ++i) {
scanf("%d", &amps[i]);
  }
total = 0;
printf("\nArray values are: ");
for (i = 0; i < 8; ++i) {
printf("%4d ", amps[i]);
total += amps[i];
}
printf("\nAverage is %6.2f\n", (float)total/8);
}
```

3.

```
#include <stdioi.h>
int main(void) {

float volts[9];
int i, j;
for (i = 0; i < 9; ++i) scanf("%f", &volts[i]);

/* read in 9 float numbers */
/* now print out as requested using nested for loops */

for (i = 0; i < 9; i += 3) {

for (j = 0; j < 3; ++j)

/* now print out 3 values in a row */

printf("%8.2f", volts[i + j]);
printf("\n");
```

```
/* add newline to split rows*/

}
}
```

4.

```
#include <stdio.h>
struct pay_rec
/* construct a global structure template*/
{ long id;
char name[20];
float rate; };

int main(void) {

int i;
struct pay_rec employee [5] = { {32479, "Abrams, B.", 6.72}, {33623, "Bohm, P.", 7.54}, {34145, "Donaldson, S.", 5.56}, {35987, "Ernst, T.", 5.43}, {36203, "Gwodz, K.", 8.72} };

for (i = 0; i < 5; ++i)
printf("\n%ld %-20s %4.2f", employee[i].id, employee[i].name, employee[i].rate); }
```