1. What will be the output?

```
#include<stdio.h>
void mysteryFun(char str[])
{
    char *p1, *p2;
    char temp;
    p1 = str;
    p2 = str + 9;
    while (p2 > p1)
    {
        temp = *p1;
        *p1 = *p2;
        *p2 = temp;
        p1 = p1 + 2;
        p2 = p2 - 2;
    }
    printf("%s\n", str);
}

int main(void)
{
    char str[] =
    {
        ‘a’,‘l’,‘p’,‘h’,‘a’,‘b’,‘e’
        ,’t’,‘i’,‘c’
    };
    mysteryFun(str);
    return 0;
}
```

Answer: clthbaepia

2. What will be the output?

```
#include<stdio.h>
void mysteryFun(char str[])
{
   char *p1, *p2;
   char temp;
   p1 = str;
   p2 = str + 9;
   while (p2 > p1)
   {
      temp = *p1;
      *p1 = *p2;
      *p2 = temp;
      p1 = p1 + 2;
      p2 = p2 - 2;
   }
   printf("%s\n", str);
}
int main(void)
{
   char str[] = “alphabetic”;
   mysteryFun(str);
   return 0;
}
```

Answer: clthbaepia

char socsec[12] = “123-456-789”;

char ssnshort[7], ssn1[4], ssn2[3], ssn3[5];

Write statements to accomplish the following:

1. store in ssnshort as much of socsec will fit.

```
#include <stdio.h>
#include <string.h>
int main (]) {

  char socsec[12] = "123-456-789";
  char ssnshort[7];

  strncpy(ssnshort,socsec, 6);

  printf("%s\n", ssnshort);
  return 0;
}
```

2. store in ssn1 the first three characters of socsec.

```
#include <stdio.h>
#include <string.h>

int main () {

  char socsec[12] = "123-456-789";
  char ssn1[4];

  strncpy(ssn1, socsec, 3);

  printf("%s\n", ssn1);

  return 0;
}
```

3. store in ssn2 the middle three-digit portion of socsec.

Trying to store the middle three-digit portion of socmec to ssn2 is not possible. Because ssn2 has only been given the size of 3, meaning the variable

can only store 2 characters inside the strings to make space for the null terminating character ‘\0’. To make the operation work. The ssn2 should be given the size of 4.

```
#include <stdio.h>
#include <string.h>

int main () {

  char socsec[12] = "123-456-789";
  char ssn2[4];

  strncpy(ssn2, &socsec[4],3);

  printf("%s\n", ssn2);

  return 0;
}
```

4. store in ssn3 the final four digits of socsec.

```
#include <stdio.h>
#include <string.h>

int main () {

  char socsec[12] = "123-456-789";
  char ssn3[5];

  strncpy(ssn3, &socsec[7],4);

  printf("%s\n", ssn3);

  return 0;
}
```

The output of the following program is “Programming in C is a game.” Fill in the most appropriate set of instructions to fill in for the numbered steps in the program.

```
#include<stdio.h>
int main() {
        char s1[] = "Programming in C", s2[5],
        s3[5];
        1. strncpy(s2,&s1[3],1);
        s2[1] = '\0';
        2. strncpy(s3, &s1[5],2);
        s3[2] = '\0';
        3. strcat(s2, strcat(s3,"e"));
        printf ("%s is a %s\n", s1, s2);
}
```