

Signature _____

Name:
cs30x_____

Student ID _____

Score:

Quiz 3
CSE 30
Spring 2003

#1.

a) Write the appropriate **save** instruction to allocate stack space for the following local variables and any padding.

```
char          a;  
unsigned short b;  
char          c;  
int           d;  
short         e;  
int           f;
```

save _____ , _____ , _____

(Use the formula, not an absolute value)

b) Write the appropriate unoptimized SPARC assembly instructions using the above local variables.

d = 8675309;

b = 0xCAFE;

a = c;

f = e;

(OVER)

#2.

a) Write the appropriate **save** instruction to allocate stack space for the following local variable declaration.

```
char a[8];
```

```
save _____ , _____ , _____  
(Use the formula, not an absolute value)
```

b) Write the appropriate instructions to perform the following assignment statements.

```
a[2] = a[4];
```

```
_____
```

```
_____
```

```
a[1] = a[3];
```

```
_____
```

```
_____
```

```
char *ptr; /* ptr mapped to %11 */
```

```
ptr = &a[0];
```

```
_____
```

```
ptr++; /* ptr mapped to %11 */
```

```
_____
```

```
char d = *ptr; /* d mapped to %10; ptr to %11 */
```

```
_____
```

```
*ptr = d; /* d mapped to %10; ptr to %11 */
```

```
_____
```