

Signature _____

Name:
cs30x _____

Student ID _____

Score:

Quiz 3
CSE 30
Fall 2003

#1.

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

```
char          a;  
int           b;  
unsigned short c;  
char          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.

```
f = 8675309;
```

```
c = 0xBABE;
```

```
b = f;
```

```
d = a;
```

(OVER)

#2.

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

```
long a[6];
```

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

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

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

```
_____  
_____
```

```
a[2] = a[5];
```

```
_____  
_____
```

```
long *ptr;
```

```
/* ptr mapped to %13 */
```

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

```
_____
```

```
ptr++;
```

```
/* ptr mapped to %13 */
```

```
_____
```

```
long x = *ptr;
```

```
/* x mapped to %10; ptr to %13 */
```

```
_____
```

```
*ptr = x;
```

```
/* x mapped to %10; ptr to %13 */
```

```
_____
```