

Name:  
cs30x\_\_\_\_\_  
Score:

**Quiz 3**  
**CSE 30**  
**Winter 2003**

#1.

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

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

```
save _____ , _____ , _____
```

(Use the formula, not an absolute value)

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

```
c = 'B';
```

---

```
d = -9876;
```

---

```
a = b;
```

---

```
f = c;
```

(OVER)

#2.

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

```
double a[6];
```

```
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];
```

```
_____
```

```
_____
```

```
double *ptr;
```

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

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

```
_____
```

```
ptr++;
```

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

```
_____
```

```
double d = *ptr;
```

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

```
_____
```

```
*ptr = d;
```

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

```
_____
```