Quiz 3
CSE 30
Spring 2004

#1.

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

```
char a;
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.

```
d = 8675309;
```

```
b = 0xBABE;
```

```
a = 'A';
```

```
e = c;
```

(OVER)
#2.
a) Write the appropriate save instruction to allocate stack space for the following local variable declaration.

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

save __________ , ______________________________ , __________
(Use the formula, not an absolute value)

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

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

________________________
________________________

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

________________________
________________________

```c
double *ptr; /* ptr mapped to %l2 */
ptr = &a[0];
```

________________________

```c
ptr++; /* ptr mapped to %l2 */
```

________________________

```c
double x = *ptr; /* x mapped to %l0; ptr to %l2 */
```

________________________

```c
*ptr = x; /* x mapped to %l0; ptr to %l2 */
```

________________________

#3. Explain what it means when we say pointer arithmetic uses scaling.