#1.

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

```plaintext
long a;
char b;
short c;
unsigned short d;
char e;
char f;
```

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

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

```plaintext
a = e;

```

```plaintext
d = 0xBABE;

```

```plaintext
b = c;

```

```plaintext
f = 'W';

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

```c
int a[8];
```

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

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

```c
a[5] = a[3];
```

```
________________________
________________________
```

```c
a[1] = a[4];
```

```
________________________
________________________
```

```c
int *ptr; /* ptr mapped to %l4 */
```

```c
ptr = &a[2];
```

```
________________________
```

```c
++ptr; /* ptr mapped to %l4 */
```

```
________________________
```

```c
int d = *ptr; /* d mapped to %l2; ptr to %l4 */
```

```
________________________
```

```c
*ptr = d; /* d mapped to %l2; ptr to %l4 */
```

```
________________________
```

#3. Give the equivalent C array expression for the following pointer expression.

```
*(a + 42) is equivalent to ____________________________ (equivalent array expression).
```