#1. In a typical CISC architecture

A) Callee  B) Caller

_____ saves the PC (program counter) as the return address.

_____ pushes the actual arguments onto the stack.

_____ accesses the formal parameters via an offset from the FP (frame pointer).

_____ allocates space for local variables.

_____ allocates space for the return value.

_____ stores the return value in the return value location.

#2. a) Convert \texttt{125.875_{10}} to \textbf{binary} fixed-point and single precision IEEE floating-point representation (expressed in \textit{hexadecimal}).

binary fixed-point \hspace{2cm} \times \hspace{2cm} 2^0

IEEE floating-point \hspace{2cm} (\textit{hexadecimal})

b) Convert \texttt{0xC268000} (single precision IEEE floating-point representation) to fixed-point \textbf{decimal}.

fixed-point decimal \hspace{2cm} (\textbf{decimal} / no exponential notation)
#3. Given

```c
static void fubar( int a )
{
    void (*b) (int) = fubar;
    static int c = 5;
    ...
}
```

When this function is called, identify which area of the C Runtime Environment each of the following will be allocated and its scope or visibility.

<table>
<thead>
<tr>
<th>Area of Runtime Env.</th>
<th>Scope/Visibility (Global/File/Function)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td></td>
</tr>
<tr>
<td>b</td>
<td></td>
</tr>
<tr>
<td>c</td>
<td></td>
</tr>
<tr>
<td>fubar</td>
<td></td>
</tr>
<tr>
<td>Where b</td>
<td></td>
</tr>
<tr>
<td>is pointing</td>
<td></td>
</tr>
</tbody>
</table>

If the function above is called 15 times, indicate how many times will c be initialized to 5? ________

#4. What gets printed with the function call `mystery( 15 );`?

```c
int mystery( int param ) {
    int local = 50;

    if ( local > param )
    {
        local = local - param;
        printf( "%d\n", local ); /* Output the value of local followed by a newline */
        param = mystery( param + 10 ) + local;
        printf( "%d\n", param ); /* Output the value of param followed by a newline */
    } else {
        printf( "Halt\n" );
    }

    return local;
}
```

Put answer here