

# Quiz 3: Answer Key

1. Construct the decimal number 48 with only the following:

- (a) The number 1
- (b) Shifts
- (c) Parentheses
- (d) Subtract 1

$$\frac{0110000}{((1 \ll 2) - 1) \ll 4}$$

2. Write your answer in binary.

Evaluate:  $0xAC + 0x1E$



$$\begin{array}{r} 10101100 \\ + 00011110 \\ \hline 11001010 \end{array}$$

3. What number would you chmod a file to get the following permissions?

- (a) User has read/write/execute permissions
- (b) Group has only write permissions
- (c) The world ("other") has read/write permissions, but no execute permissions.

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4. Consider the following program:

```
#include <stdio.h>

int foo(int x)
{
    if (x>0)
    {
        return 1;
    }
    int y = x+foo(x-1);
    return y;
}

int main(void)
{
    int bar = foo(5);
    printf("%d\n", bar);
    return 0;
}
```

If you thought the bug in your program was in the foo method, particularly with the variable y, what would be the first command you execute after loading in your executable?

- (a) watch y
- (b) continue
- (c) break foo
- (d) next