

# Chapter 4 Homework

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**Problem 4.1.** If  $r0$  initially contains 1, what will it contain after the third instruction in the sequence below?

```
add    r0, r0, #1      %r0=2
mov     r1, r0          %r1=2
add     r0, r1, r0 lsl #1 %r0=6
```

**Solution**  $r0 = 6$

**Problem 4.2.** What will  $r0$  and  $r1$  contain after each of the following instructions? Give your answers in base 10.

```
mov     r0, #1          %r0=1
mov     r1, #0x20       %r1=32
orr      r1, r1, r0      %r1=33
lsl      r1, #0x2        %r1=132
orr      r1, r1, r0      %r1=133
eor      r0, r0, r1      %r0=132
lsr      r1, r0, #3      %r1=1056
```

**Solution**

$r0 = 132$

$r1 = 1056$