

Revision sheet 3:

1. MuO has 24 memory locations and each location can store a 16 bit number.
  - a. Describe the format of the 16 bit instruction code.
  - b. Write the machine code to add two numbers stored in memory locations 0x30 and 0x31.
  - c. Write the machine code to compare two numbers stored in memory location 0x30 and 0x31. If they are the same copy the number into 0x33, else save the difference in 0x33.
2. State the single ARM instructions which would perform the following integer operations.
  - a.  $R10 = R10 + R3$
  - b.  $R5 = R0 + 0x26$
  - c.  $R2 = R3 * 32$
  - d.  $R2 = R3 + R3/2$
  - e.  $R4 = R1 \times 7$
  - f.  $R6 = R1 + R2 * 2048$