1.

a.   R1, =x
     R1, [R1]
     R2, =y
     R2, [R2]
     CMP   R1, R2
     BLE   R0, =6
     B   R0, =R1
b.   CBZ   R0, DONE
     ADD   R0, R0, R1
     B   top
     MOV   R0, R1
c.   LDR   R0, =x
     LDR   R0, [R0]
     CMP   R0, 10
     BHI   L1
     CMP   R0, 20
     BLO   L2

2.

a.   LDR   R0, =a
     LDR   R0, [R0]
     LDR   R1, =b
     LDR   R1, [R1]
     CMP   R0, 0
     ITET   6T
     CMP   R0, 100
     IT   6T
b.   LDR   R0, =a
     LDR   R0, [R0]
     LDR   R1, =b
     LDR   R1, [R1]

```
        CMP         R0, 100
        ITET        6T
        CMP         R0, S0
        IT          6T
```

3.

a.
```
        R0, =a
        R1, =b
        R2, =c
        CMP         R0, R1
        BLE         L1
        L1:         ADD R2, R1, 2
```

b.
```
        R0, =a
        R1, =b
        R2, =c
        CMP         R0, R1
        EQU         L1
        B           L2
        L1:
                    R2, =0
        L2:
                    SUB         R2, R0, R1
```

c.
```
        R0, =a
        R1, =b
        R2, = c
        CMP         R1, R1
        BLE         L1
        B           L2
        L1:
                    R0, = R1
        L2:
                    R0, =R2
```

4.

    a. R0, =x

        R1, =y

        R2, =z

        CMP   R0, R1

        BLT   L1

        B   L2

        L1:

                  R2, =6

        L2:

                  R2, =R0

    b. R0, =x

        CMP   R0, -10

        BLT   L1

        CMP   R0, 10

        BGE   L2

        L1:

    c. R0, =x

        R1, =y

        CMP   R0, 10

        BLT   L1

        CMP   R0, 20

        BLE   L2

        L1:

                  R1, =0

        L2:

                  R1, =1

    d. R0,   ch

        CMP   'a', ch

        BLT   L1

        L1:

```
                            ADD            R0, R0, 'A'
                            SUB            R0, R0, 'a'
e.   R0, =x
     R1, =y
     UDIV           R0, R1, 5
f.   R0, =u32
     R1, =s32
     CMP            u32, 10
     BLM            L1
     B              L2
     L1:
                            SUB            R1, R1, 1
     L2:
                            ADD            R1, R1, 1
g.   R0, =s32
     CMP            -10, R0
     BLT            L1
     L1:
                            R0, =0
```