1. Assembly Language What is the final value in the ACC when the program is RUN?

```
X     DC     3
Y     DC     10
      LOAD   X
      MULT   X
      SUB    Y
      BG     HERE
      SUB    X
HERE  ADD    Y
      END
```

2. Assembly Language What is the final value of C when this program is RUN?

```
A     DC     3
B     DC     21
C     DC     0
TOP   LOAD   C
      ADD    =1
      STORE  C
      LOAD   B
      SUB    A
      STORE  B
      LOAD   B
      SUB    A
      BG     TOP
      END
```

3. Assembly Language What is the final value of X when this program is RUN?

```
X     DC     0
J     DC     4
TOP   LOAD   J
      MULT   J
      ADD    X
      STORE  X
      LOAD   J
      SUB    =1
      STORE  J
      BG     TOP
      END
```

4. Assembly Language What is the final value of C when this program is RUN?

```
A     DC     5
B     DC     100
C     DC     0
TOP   LOAD   C
      ADD    =1
      STORE  C
      LOAD   B
      SUB    A
      SUB    A
      STORE  B
      LOAD   B
      SUB    A
      BG     TOP
      END
```

5. Assembly Language

When the following program is run, it is given the numbers

-3 2 1 -4 5 -9 8 0 7

as data. Find the final values of A and B.

```
A   DC      0
B   DC      0
D   READ    N
    LOAD    N
    BE      E
    BG      C
    LOAD    B
    ADD     N
    STORE   B
    BU      D
C   LOAD    A
    ADD     N
    STORE   A
    BU      D
E   END
```

6. Assembly Language

When the following program is run, what is the final value in the ACC?

```
TMP     DC      0
A       DC      1
B       DC      3
        LOAD    A
        MULT    =2
        STORE   TMP
        LOAD    B
        MULT    = -1
        DIV     TMP
        END
```

7. Assembly Language

When the following program is run, what are the final values of A, B, and C?

```
A       DC      0
B       DC      15
C       DC      10
T       DC      0
START   LOAD    T
        ADD     =1
        STORE   T
        LOAD    B
        ADD     C
        STORE   A
        LOAD    B
        ADD     A
        STORE   B
        SUB     =100
        BL      START
        END
```

8. Assembly Language

When the following program is run, what is printed?

```
A       DC      5
B       DC      4
C       DC      2
        LOAD    A
        SUB     B
        SUB     C
        BG      ONE
        BL      TWO
ONE     STORE   X
        PRINT   X
        END
TWO     STORE   X
        LOAD    C
        ADD     X
        STORE   C
        PRINT   C

        END
```

SOLUTIONS

1. 6
2. 6
3. 30
4. 10
5. 16, -16
6. - 1
7. 100, 190, 10
8. 1