CS 1050, Mr. Kramer Sample Exam #1, p. 1 of 8 Total 160 points

Put your answers in the space provided.

1. a. -40 -8 * 5 / 2 * 2

   b. 6.5 85 % 10 / 2.0 + 4

   c. 6 10 / 4 * 3 - 2 + 17 % 5

   d. 17 15.0 / 2 * 2 + 15 / 7

2. 12 pts. In each part, use the code to fill in the values. Use a ? if the event is not determined by the code.

   a. `int a = 1, b = 7, c = 5;`
   `a = b + 4; c = 4;` a 11 b 7 c 4

   b. `int a = 11, b = 3; float c = 1.0;`
   `c = a/b; b = ++a` a 12 b 12 c 3.0

   c. `int a = 2, b = 4, c = 8;`
   `a = b++ + c++;` a 12 b 5 c 9

In #3 and #4, you can use 1 or T or t for true, and 0 or F or f for false.

3. 5 pts. Evaluate the following Java logical expressions using C = true, D = true. E = false, F = false. Place answer on the line.

   a. T `E || (D && C) || D`

   b. T `(E && F) || (C && D)`

   c. T `(! D) || C`

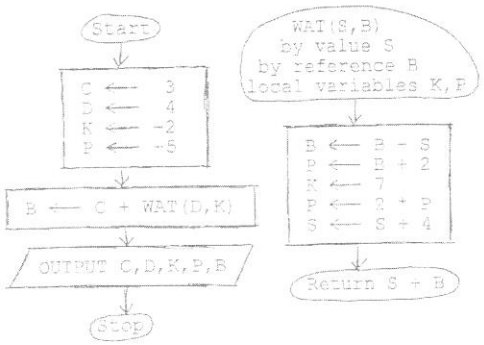
   d. T `F || (C && (!E))`

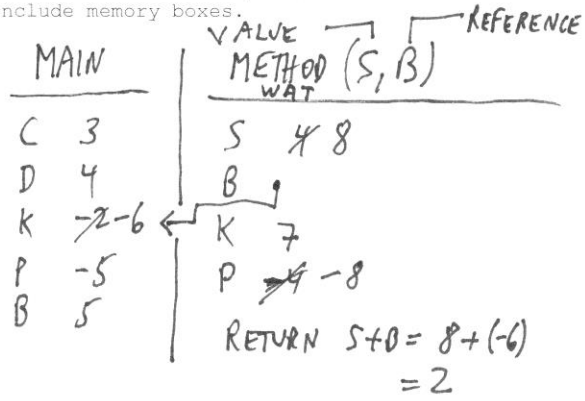
   e. F `(! (E || D)) && C`

4. 8 pts (2 pts each). Fill in the truth value for the Java expression depending on the value of x.

Expression	Value of x: 0	3	5	7	8
`x < 7 || x == 3 && x == 7 || x > 3`	T	T	T	T	T
`x == 3 || x > 3 && x > 7 || x == 7`	F	T	F	T	T
`x == 3 || x < 7 && x > 3 || x == 7`	F	T	T	T	F
`x < 3 || x > 7 && x == 7 || x == 3`	T	T	F	F	F

6. 16 pts. Use the flowcharts to determine the answers and put them in the space provided. Show work, include memory boxes.
ADD B <- 0 after Start



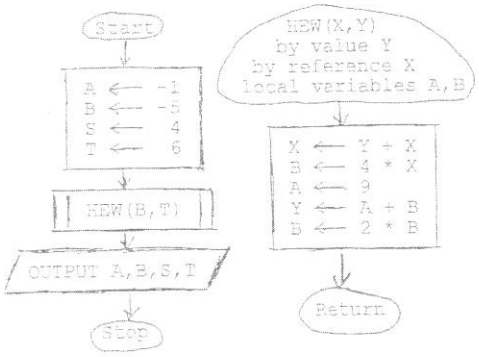


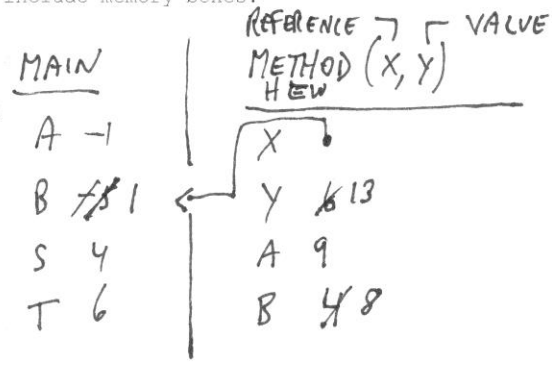
a. The actual parameters are D, K

b. The formal parameters are S, B

c. The output produced is 3 4 -6 -5 5

7. 16 pts. Use the flowcharts to determine the answers and put them in the space provided. Show work, include memory boxes.



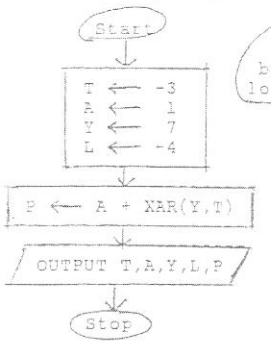


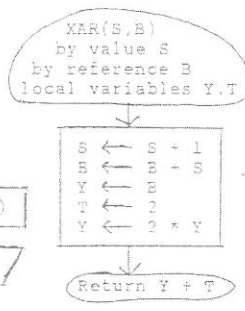
a. The actual parameters are B, T

b. The formal parameters are X, Y

c. The output produced is -1 1 4 6

6. 16 pts. Use the flowcharts to determine the answers and put them in the space provided. Show work, include memory boxes.





MAIN PROGRAM

T	~~-3~~ 5
A	1
Y	7
L	-4
P	13

METHOD XAR

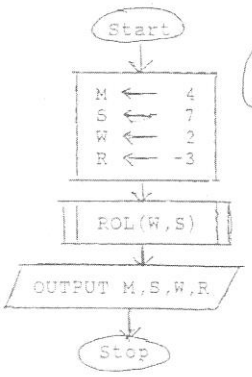
S (VALUE)	
B (REFERENCE)	
Y	~~7~~ 10
T	2
RETURN	10+2=12

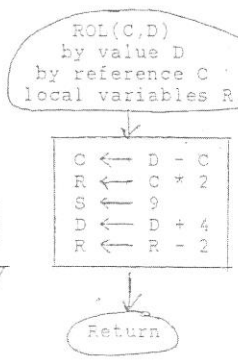
a. The actual parameters are Y, T (AKA ARGUMENTS)

b. The formal parameters are S, B

c. The output produced is 5 1 7 -4 13

7. 16 pts. Use the flowcharts to determine the answers and put them in the space provided. Show work, include memory boxes.





MAIN PROGRAM

M	4
S	7
W	~~2~~ 5
R	-3

METHOD ROL

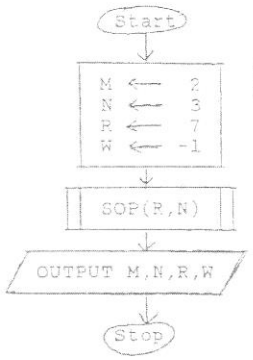
C (REFERENCE)	
D (VALUE)	~~7~~ 11
R	~~10~~ 8
S	9

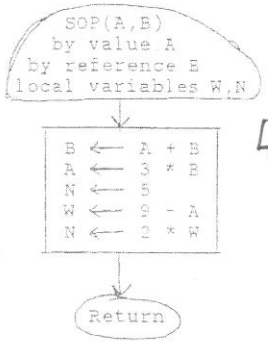
a. The actual parameters are W, S (AKA ARGUMENTS)

b. The formal parameters are C, D

c. The output produced is 4 7 5 -3 ≡

6. 16 pts. Use the flowcharts to determine the answers and put them in the space provided. Show work, include memory boxes.





MAIN PROGRAM

M 2

~~N 10~~

R 7

W -1

METHOD SOP

A (VALUE) ~~7~~ 30

B (REFERENCE)

W -21

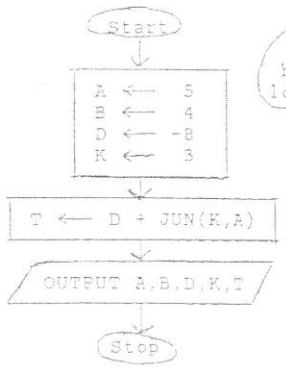
N ~~5~~ -42

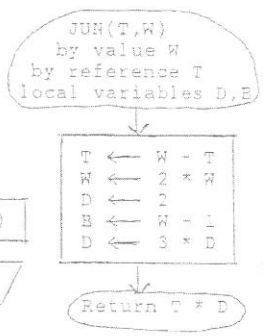
a. The actual parameters are R, N (AKA ARGUMENTS)

b. The formal parameters are A, B

c. The output produced is 2 10 7 -1 /

7. 16 pts. Use the flowcharts to determine the answers and put them in the space provided. Show work, include memory boxes.





MAIN PROGRAM

A 5

B 4

D -8

~~K 2~~

T 4

METHOD JUN

T (REFERENCE)

W (VALUE) ~~5~~ 10

D ~~2~~ 6

B 9

RETURN 2 * 6 = 12

a. The actual parameters are K, A (AKA ARGUMENTS)

b. The formal parameters are T, W

c. The output produced is 5 4 -8 2 4