Homework 3, ~~problem~~

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13. and

a) Evaluated from left to right:

```
Sum1 = (i/2) + fun(&i);
```

→ Sum1 = (10/2) + fun(&i);

→ Sum1 = 5 + fun(&i);

→ Sum 1 = 5 + 41)

⇒ Sum 1 = 46

```
sum 2 = fun(&j) + (j/2);
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→ Sum 2 = 41 + (j/2); (by ①)

→ Sum 2 = 41 + (14/2);

→ Sum 2 = 41 + 7 = 48.

① → { func(&i)
*K += 4; (10+4)
→ return (3*(*k)-1)
→ return (3*14-1)
} returns 41;

b) Right to left

Sum 1 = (i/2) + fun(&i);

Sum 2 = fun(&j) + (j/2);

Since its Right to left now, i=j=10,

Sum 1 will be similar to left to right of Sum 2 and vice-versa.

i.e, Sum 1 = 48 ;

Sum 2 = 46 ;

(2)

Sol: The output was

Sum 1 : 46

Sum 2 : 48

This is because C or compiler read from left to right the function in

Also since, as call-by-reference the values of i and j are changed after

the function is called.

So,

[(i/2) (fun(&i))]

Sum1 = 5 + 41 = 46;

Sum2 = 41+7 = 48.

[(fun(&j)) + (j/2)]

More detailed ~~exp~~ explanation (step-by-step) is given in problem 1 part (a).
Please do consider that as an explanation as well.

Problem 3:

Sol: The output is b

With function call on the right, b is 80.
With function call on the left, b is 40

This is because, when the function is called on right,
b = a + fun(&a); a is not changed so
its (10 + fun(&a));

Later,

$b = 10 + 20;$ (∵ function add 10 to a and returns a)

$\boxed{b = 30}$:

But when function in call on left, i.e,

$b = fun(\&a) + a;$

$b = 20 + a;$ and a in 20 now since its call by reference and value of a in changed

$\therefore b = 20 + 20;$

$\boxed{b = 40}$.