

7. the following code in JavaScript

Diego Rodriguez

```
var a=1;  
var b="10";  
var c=a+b;  
var d=b+a;  
print(c + " " + d)
```

the output would be 110 & 101 respectively  
thus violating the commutative addition law

8. if we had a language where ints are 8 bits, the operation  $127 + 127 + (-127)$  evaluated from left to right would yield an overflow, but from right to left, it wouldn't have any issues

13.

```
int fun(int *k) {  
    *k += 4;  
    return 3 * (*k) - 1;  
}
```

Suppose fun is used in a program as follows:

```
void main() {  
    int i = 10, j = 10, sum1, sum2;  
    sum1 = (i / 2) + fun(&i);  
    sum2 = fun(&j) + (j / 2);  
}
```

What are the values of sum1 and sum2

- a. if the operands in the expressions are evaluated left to right?
- b. if the operands in the expressions are evaluated right to left?

a.  $sum1 = (5) + (41) = 46$

$sum2 = (41) + (7) = 48$

b.  $sum1 = (7) + (41) = 48$

$sum2 = (41) + (5) = 46$