

## Homework 3; 35.00/70.00 (50.00%)

November 18, 2019

### Problem 1 (score: 5/10)<sup>1</sup>

- (a) NOT ok; what is the answer:  $wy' + yw'x' + zw'x' + zwy$  or  $wy' + wz + x'z + w'x'y$  (they are equivalent, but where did you show it)? Also, none of these is equivalent to original expression (try  $w = z = 1, x = y = 0$ ).
- (b) OK

### Problem 2 (score: 0/10)<sup>2</sup>

- (a) NOT ok. Expression can be simplified to 2 multiplicands (with 3 and 2 addends respectively);
- (b) NOT ok. Expression can be simplified to 4 multiplicands (each one with 3 addends);

### Problem 3 (score: 0/10)<sup>3</sup>

OK

### Problem 4 (score: 0/10)<sup>4</sup>

your answer is NOT optimal (hint: you can rewrite function as a sum of three and-expressions, each one with two terms).

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<sup>1</sup>similar problems: [https://github.com/nailbiter/for/blob/master/formasha/logic\\_design/hw2.md#el424k](https://github.com/nailbiter/for/blob/master/formasha/logic_design/hw2.md#el424k) and [https://github.com/nailbiter/for/blob/master/formasha/logic\\_design/hw2.md#dcfwv7](https://github.com/nailbiter/for/blob/master/formasha/logic_design/hw2.md#dcfwv7)

<sup>2</sup>similar problems: [https://github.com/nailbiter/for/blob/master/formasha/logic\\_design/hw2.md#ammj0g](https://github.com/nailbiter/for/blob/master/formasha/logic_design/hw2.md#ammj0g) and [https://github.com/nailbiter/for/blob/master/formasha/logic\\_design/hw2.md#49kkvy](https://github.com/nailbiter/for/blob/master/formasha/logic_design/hw2.md#49kkvy)

<sup>3</sup>similar problems: [https://github.com/nailbiter/for/blob/master/formasha/logic\\_design/hw2.md#seqrl5](https://github.com/nailbiter/for/blob/master/formasha/logic_design/hw2.md#seqrl5) and [https://github.com/nailbiter/for/blob/master/formasha/logic\\_design/hw2.md#3h4lf5](https://github.com/nailbiter/for/blob/master/formasha/logic_design/hw2.md#3h4lf5)

<sup>4</sup>similar problems:

**Problem 5 (score: 10/10)**

OK

**Problem 6 (score: 10/10)**

OK

**Problem 7 (score: 10/10)**

OK