## Digital Electronics - Worksheet

## 1. 02-03 C3 Digital Electronics

List all the ordered triples that make the following circuit FALSE.

2. 02-03 C3 Digital Electronics

Which of the following make the circuit TRUE?
a. $(0,1,0,1)$
b. $(1,0,1,0)$
C. $(1,1,1,1)$
d. $(1,0,0,1)$
e. $(0,0,1,1)$


## 3. 03-04 C3 Digital Electronics

List all the ordered pairs $(A, B)$ that make the following circuit FALSE.


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## 4. 03-04 C3 Digital Electronics

Write the following circuit as a Boolean expression with as few parentheses as possible.
Do not simplify.


## 5. 04-05 C3 Digital Electronics

How many ordered pairs make the circuit TRUE?


## 6. 04-05 C3 Digital Electronics

List all of the ordered triples that make the circuit FALSE.


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## 7. 05-06 C3 Digital Electronics

Translate the circuit to a Boolean expression and simplify.


## 8. 05-06 C3 Digital Electronics

Translate the circuit to a Boolean expression. Do not simplify. Use the fewest parentheses possible.


## 9. 06-07 C3 Digital Electronics

Translate (do not simplify) into a Boolean expression using the fewest parentheses possible.


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10. 06-07 C3 Digital Electronics

How many ordered triples make the circuit TRUE?

11. 07-08 C3 Digital Electronics

Simplify the Boolean expression that this circuit represents.


## 12. 07-08 C3 Digital Electronics

Which ordered pair(s) make the following circuit TRUE?


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13. 08-09 C3 Digital Electronics

How many ordered triples make the circuit TRUE?

14. 08-09 C3 Digital Electronics

Simplify the Boolean expression represented by this circuit.

15. $\mathbf{0 9}-10$ C3 Digital Electronics

Simplify the Boolean expression this circuit represents.


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16. 09-10 C3 Digital Electronics

Which ordered triple(s) make the following circuit TRUE?


## 17. 10-11 C3 Digital Electronics

Simplify the Boolean expression represented by this circuit.

18. 10-11 C3 Digital Electronics

Which ordered triples(s) make the following circuit TRUE?


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19. 11-12 C4 Digital Electronics

Find the ordered triples that make the circuit FALSE.

20.

11-12 C4 Digital Electronics

Simplify the Boolean expression represented by this digital circuit.


## 21. 12-13 C3 Digital Electronics

What ordered triple(s) make the following circuit FALSE?


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## 22. 12-13 C3 Digital Electronics

How many ordered pairs make the circuit TRUE?

23. 13-14 C3 Digital Electronics

Simplify the Boolean expression represented by this circuit.


## 24. 13-14 C3 Digital Electronics

Translate this circuit into a Boolean expression. Do not simplify.


