

AI Prompt: Give five more exercises on simplification of boolean expressions. Make it a combination of simple, moderate, difficult exercises

Okay, here are five more Boolean expression simplification exercises, with a mix of difficulty levels:

1. Simple:

- Expression: $(A \text{ OR } \text{False}) \text{ AND } (B \text{ OR } \text{False})$

2. Simple:

- Expression: $(A \text{ AND } \text{True}) \text{ OR } (B \text{ AND } \text{True})$

3. Moderate:

- Expression: $(A \text{ AND } (\text{NOT } B)) \text{ OR } ((\text{NOT } A) \text{ AND } (\text{NOT } B))$

4. Moderate:

- Expression: $(A \text{ OR } B) \text{ AND } (A \text{ OR } (\text{NOT } B))$

5. Difficult:

- Expression: $(A \text{ AND } B \text{ AND } C) \text{ OR } (A \text{ AND } B \text{ AND } (\text{NOT } C)) \text{ OR } (A \text{ AND } (\text{NOT } B) \text{ AND } C) \text{ OR } (A \text{ AND } (\text{NOT } B) \text{ AND } (\text{NOT } C))$

I've aimed for a range that will give you good practice!

Tips for Simplification:

- Use all the properties that we learned.

Solutions (Hidden - Try to work them out first!):

1. Simple:

* B AND A

2. Simple:

* A OR B

3. Moderate:

* NOT B

4. Moderate:

* A

5. Difficult:

* A