**AI Intro Homework #3**

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1.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 🡪B | 🡪C | 🡪D | 🡪E |
| A | 75 | 15 | - | - |
| B | - | - | 250 | -300 |

2.

(a) valid

(b) neither

(c) neither

(d) valid

(e) valid

(f) valid

(g) neither

3.

|  |  |
| --- | --- |
| (a) | (b) CNF clauses |
| A | A |
| D | D |
| AD | A, D |
| ABD | ABD, AD, BD |
| ADB | ABD, AB, BD |
| BDA | ABD, AB, AD |
| page2image65476992  ABC | ABC, AC, BC |
| ACB | ABC, AB, BC |
| BCA | ABC, AB, AC |
| page2image65477376  CB | BC, BC  page2image65323968 |
| BC | BC, BC |

(c)

R1:A R2:D R3: ABD R4: AB R5: AC R6: AD R7: BC

R8: BD R9: ABC R10: BC

Resolution

(R1,R3) 🡪 BD (R11)

(R2,R11) 🡪 B (R12)

(R12,R7) 🡪 C (R13)

According to the clauses R1, R2, R12, R13, A, C, and D are true, and B is false.

4.

