Упражнение

Решите следующие дедуктивные задачи двумя способами:

- методом резолюций;
- найти вывод в исчислении.

Варианты заданий:

1. $(\forall x\, A(x)) \vee \forall y\, B(y) \vdash \forall z\,.\, A(z) \vee B(z)$
2. $\exists x\,.\, A(x) \,\&\, B(x) \vdash (\exists y\, A(y)) \,\&\, \exists z\, B(z)$
3. $(\exists x\, B(x)) \supset A \vdash \forall y\,.\, B(y) \supset A$
4. $\forall x\,.\, B(x) \supset A \vdash (\exists y\, B(y)) \supset A$
5. $(\forall x\, B(x)) \supset A \vdash \exists y\,.\, B(y) \supset A$
6. $\exists x\,.\, B(x) \supset A \vdash (\forall y\, B(y)) \supset A$
7. $A \supset \forall x\, B(x) \vdash \forall y\,.\, A \supset B(y)$
8. $\forall x\,.\, A \supset B(x) \vdash A \supset \forall y\, B(y)$
9. $A \supset \exists x\, B(x) \vdash \exists y\,.\, A \supset B(y)$
10. $\exists x\,.\, A \supset B(x) \vdash A \supset \exists y\, B(y)$
11. $(\forall x\, A(x)) \,\&\, \forall y\, B(y) \vdash \forall z\,.\, A(z) \,\&\, B(z)$
12. $\forall x\,.\, A(x) \,\&\, B(x) \vdash (\forall y\, A(y)) \,\&\, \forall z\, B(z)$
13. $(\exists x\, A(x)) \vee \exists y\, B(y) \vdash \exists z\,.\, A(z) \vee B(z)$
14. $\exists x\,.\, A(x) \vee B(x) \vdash (\exists y\, A(y)) \vee \exists z\, B(z)$
15. $A \vee \forall x\, B(x) \vdash \forall y\,.\, A \vee B(y)$
16. $\forall x\,.\, A \vee B(x) \vdash A \vee \forall y\, B(y)$
17. $(\forall x\, A(x)) \vee \forall y\, B(y) \vdash \forall z\,.\, A(z) \vee B(z) \vee C(z)$
18. $(\exists x\, B(x)) \supset A \vdash \forall y\,.\, B(y) \supset (A \vee C)$

19. $\forall x\,.\,B(x) \supset A \;\vdash\; (\exists y\,B(y)) \supset (A \vee C)$

20. $(\forall x\,B(x)) \supset A \;\vdash\; \exists y\,.\,B(y) \supset (A \vee C)$

21. $\exists x\,.\,B(x) \supset A \;\vdash\; (\forall y\,B(y)) \supset (A \vee C)$

22. $A \supset \forall x\,B(x) \;\vdash\; \forall y\,.\,(A \,\&\, C) \supset B(y)$

23. $\forall x\,.\,A \supset B(x) \;\vdash\; (A \,\&\, C) \supset \forall y\,B(y)$

24. $A \supset \exists x\,B(x) \;\vdash\; \exists y\,.\,(A \,\&\, C) \supset B(y)$

25. $\exists x\,.\,A \supset B(x) \;\vdash\; (A \,\&\, C) \supset \exists y\,B(y)$

26. $A \vee \forall x\,B(x) \;\vdash\; \forall y\,.\,A \vee C \vee B(y)$

27. $\forall x\,.\,A \vee B(x) \;\vdash\; A \vee C \vee \forall y\,B(y)$