

Remark on my paper: On Skolem's theorem.

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It was proved in my paper [1] that if the system of axioms of Fraenkel-von Neumann of the set-theory is consistent, then system remains consistent after addition of the axiom that every set is a univalent image of ω . This result was established by Theorems 1, 2 of that paper. I should like to remark now that from the proof of these theorems follows immediately also the following result:

“Let Γ_1 be any consistent system of axioms in Gentzen's *LK*, representing mathematically a certain domain D of elements. Then Γ_1 remains consistent after addition of the system of axioms of the theory of natural numbers, and the axiom that every element of D is a univalent image of a natural number.

I shall formulate this result more precisely in the following lines, and indicate how to prove it.

We begin with Γ_a , the system of axioms of “arithmetic” consisting of axioms of the theory of natural numbers except the axiom of mathematical induction. In this paper, Γ_a means the following axioms:

$$\begin{aligned}
 & \forall x(x=x) \\
 & \forall A \forall x \forall y (x=y \vdash (A(x) \vdash A(y))) \quad (\text{See [3], § 1 for the notation } \forall A.) \\
 & \forall x \forall y \forall z (x < y \wedge y < z \vdash x < z) \\
 & \forall x \forall y \neg (x=y \wedge x < y) \\
 & \forall x \forall y (x < y \vdash x' < y \vee x' = y) \\
 & \forall x (x < x') \\
 & \forall x (0 < x \vee 0 = x) \\
 & \forall x (x + 0 = x) \\
 & \forall x \forall y (x + y' = (x + y)') \\
 & \forall x \forall y (x + y = y + x) \\
 & \forall x \forall y \forall z ((x + y) + z = x + (y + z)) \\
 & \forall x \forall y (x < y \vdash \exists z (0 < z \wedge x + z = y)) \\
 & \forall x \forall y (x \cdot y = y \cdot x) \\
 & \forall x \forall y \forall z ((x + y) \cdot z = x \cdot z + y \cdot z)
 \end{aligned}$$