

Review of: "Results in Cone Metric Spaces and Related Fixed Point Theorems for Contractive Type Mappings"

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Potential competing interests: No potential competing interests to declare.

In this manuscript, the authors attempt to establish the existence of fixed points for contractive type mappings in cone metric spaces. The main results of the manuscript are Theorems 3.3 and 3.4 concerning type I contractions and type II contractions, respectively. Here are some comments/suggestions intending to correct/help the authors to correct/improve their manuscript.\\

1. Page 4, line 4: It is written that

\begin{center} "Since $a_1 + a_2 + a_3 < 1$ implies that $\frac{a_1 + a_3}{1-(a_1 + a_2)} < 1$. Hence ..." \end{center}

which does not seem correct (e.g., take $a_1=a_3=1/4,a_2=3/8$.

2. As \$d(x,y) \in E\$, the definition of multiplication/division in \$E\$ should be given so that inequalities in (3.1), etc., make sense. As such multiplications/fractions appear in many places, possible changes in notation will affect a great part of the manuscript.\\

Comments 1 and 2 above are crucial as they appear in the very beginning of the proof of Th. 3.3 and 3.4. Since both the main results of the manuscript bend on these, they must be corrected/stated in a clear and solid way. In turn, (3.3) and (3.8) should be re-stated and justified in detail. \\

- 3. The second sentence in Corollary 3.5 is rather confusing: the definition of type I contraction has already been given, yet what is \$n\$? (Is the assumption "there exists an \$n \in N\$ such that the operator \$T^n\$ is a type I contraction" missing?)
- 4. It seems that there is some misprint in the definition of \$B(x 0,c)\$ in Definition 4.1.\\
- 5. The proof (or a hint) of the way that Corollary 3.7 follows from the main results of the manuscript should be given. \\
- 6. As it concerns misprints/errors in the use of language, there are several of them that the authors should take care of.



For example, the second and third sentences in Th. 3.3 would be replaced by: "Assume that a mapping \$T:X\rightarrow X\$ is a type I contraction. Then \$T\$ has a unique fixed point \$p\$ in \$X\$ and the iterative sequence \$\{T^n x \}\$ converges to \$p\$, for any \$x \in X\$, or, "If \$T:X\rightarrow X\$ is a type I contraction mapping, then \$T\$ has a unique fixed point \$p\$ in \$X\$ and, for any \$x \in X\$,

the iterative sequence ${T^n x }\$ converges to $p.\$

7. The readers would appreciate finding some comments on the use/need of Lemmas 7, 8, 11, 12, 13.

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