

# *Povzetek*

V diplomskem delu sem se ukvarjala z lastnostmi valvacijskih kolobarjev in Dedekindovih domen. V začetnih poglavjih sem predstavila noetherske in lokalne kolobarje ter splošne lastnosti valvacij in valvacijskih kolobarjev ter navedla pogoje za njihov obstoj. Nato sem definirala kolobarje z diskretno valvacijo, pogledla njihovo karakterizacijo in jih primerjala s splošnimi valvacijskimi kolobarji. V naslednjem poglavju sem definirala Dedekindove kolobarje in predstavila njihove lastnosti, med katerimi najpomembnejšo opisuje Akizuki-Krullovo izreko. V zadnjem poglavju sem na kratko opisala topologijo, porojeno z diskretno valvacijo.

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**Ključne besede:** Noetherski kolobarji, Lokalni kolobarji, Valvacije, Kolobarji z diskretno valvacijo, Dedekindove domene.

# *Abstract*

In the diploma thesis I looked into different properties of valuation rings and Dedekind domains. In first chapters I introduced Noetherian and local rings and proceeded with properties of general valuations, valuation rings and their existence. In the next chapter I defined discrete valuation rings, described their characterization and compared them with general valuation rings. Next, I looked at Dedekind domains and their properties and I finished with Akizuki-Krull theorem. I concluded with a short look into topological properties of discrete valuation rings and completions.

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**Keywords:** Noetherian rings, Local rings, Valuations, Discrete valuation rings, Dedekind domain.

# Literatura

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