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Abstract. This paper contains a sample article in the Topology Proceedings format. The article includes a simple example of a figure with an animation and a static graphic that shows instead of the animation when the file is printed.

1. Introduction

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To produce the PDF output file download the source files toproc-anim.tex, static.pdf and rotation.avi. Then process toproc-anim.tex twice by pdflatex.

2010 *Mathematics Subject Classification.* Primary 54X10, 58Y30, 18D35; Secondary 55Z10.

Key words and phrases. Some objects, some conditions.

ALL references are real and correct; ALL citations are imaginary.

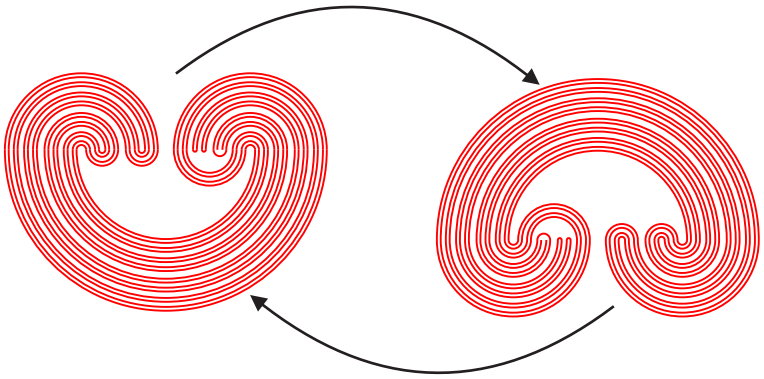

FIGURE 1. An example animation. (Click in the figure to activate.)

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3. Main Results

Let $\mathcal{S}$ denote the set of objects satisfying some condition.

Definition 3.1. Let n be a positive integer. An object has the property $P(n)$ if some additional condition involving the integer n is satisfied. We will denote by S_n the set of all s in $\mathcal{S}$ with the property $P(n)$.

The following proposition is a simple consequence of the definition.

Proposition 3.2. *The sets $S_1, S_2, \ldots$ are mutually exclusive.*

Lemma 3.3. *If $\mathcal{S}$ is infinite, then $\mathcal{S} = \bigcup_{n=1}^{\infty} S_n$.*

Proof. Since $\mathcal{S}$ is the set of objects satisfying some condition, it follows from [1] that

$$\operatorname{obj}(\mathcal{S}) < 1. \tag{3.1}$$

By [3, Theorem 3.17], we have

$$\operatorname{obj}(S_n) > 2^{-n}$$

for each positive integer n. This result, combined with (3.1) and Proposition 3.2, completes the proof of the lemma. □

Theorem 3.4 (Main Theorem)**.** *Let $f : \mathcal{S} \to \mathcal{S}$ be a function such that $f(S_n) \subset S_{n+1}$ for each positive integer n. Then the following conditions are equivalent.*

(1) $\mathcal{S} = \emptyset$.
(2) $S_n = \emptyset$ *for each positive integer* n.
(3) $f(\mathcal{S}) = \mathcal{S}$.

Remark 3.5. Observe that the condition in the definition of $\mathcal{S}$ may be replaced by some other condition.

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