

Prof. Dr. Alfred Toth

Zählabbildungen bei Peircezahlen

1. Während die Peanozahlen linear definiert sind, sind die Peircezahlen flächig eingeführt (vgl. Bense 1975, S. 35 ff., Toth 2010). Peanozahlen besitzen also als triviales Zahlenfeld die Strecke.

Zahlenfelder:

Peano: (1, 2, 3)

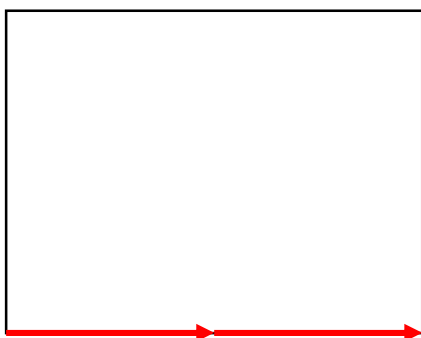
Peirce: 1.1 2.1 3.1
 1.2 2.2 3.2
 1.3 2.3 3.3

2. Im Peanozahlenfeld gibt es somit genau 1 Abbildung:

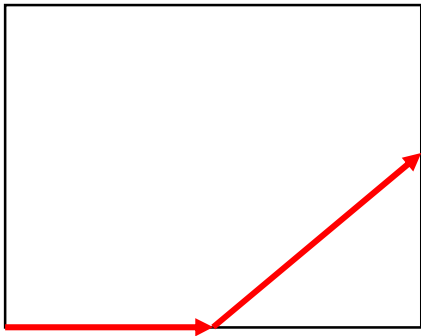
1 → 2 → 3.

Dagegen sind im Peircezahlenfeld $3^3 = 27$ Zählabbildungen möglich. Ihre Anzahl ist somit gleich der Menge der über der allgemeinen Zeichenform $Z = (3.x, 2.y, 1.z)$ mit $x, y, z \in (1, 2, 3)$ erzeugbaren triadisch-trichotomischen Zeichenrelationen. Wir zeichnen sie im folgenden in je ein Zahlenfeld ein, das wir uns horizontal und vertikal gedrittelt vorstellen.

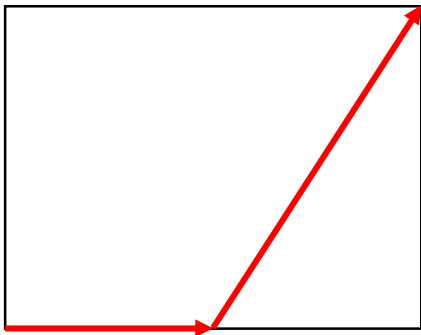
1.1 → 2.1 → 3.1



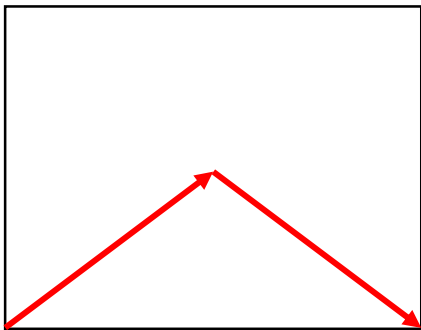
1.1 → 2.1 → 3.2



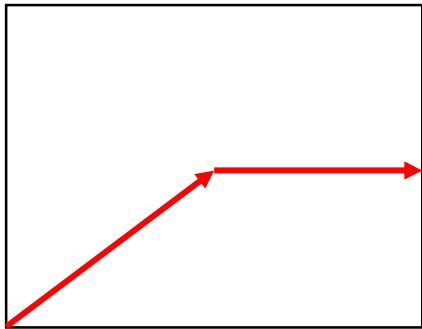
1.1 → 2.1 → 3.3



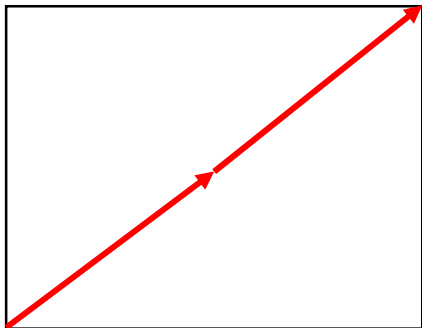
1.1 → 2.2 → 3.1



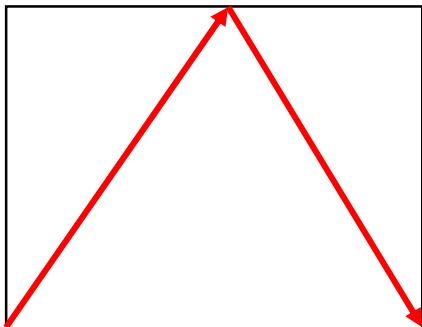
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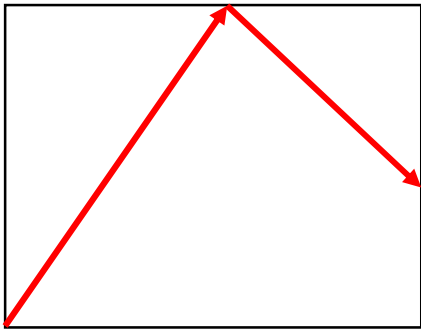
1.1 → 2.2 → 3.3



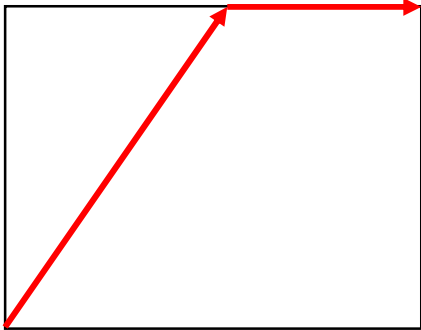
1.1 → 2.3 → 3.1



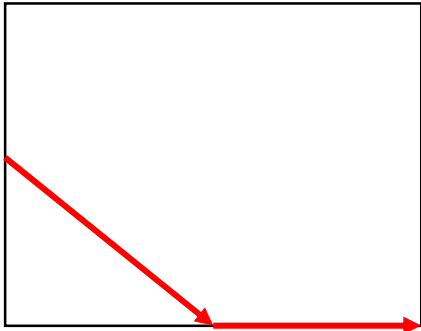
1.1 → 2.3 → 3.2



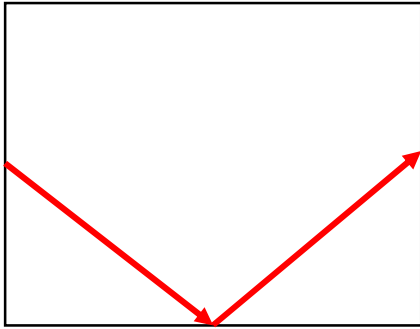
1.1 → 2.3 → 3.3



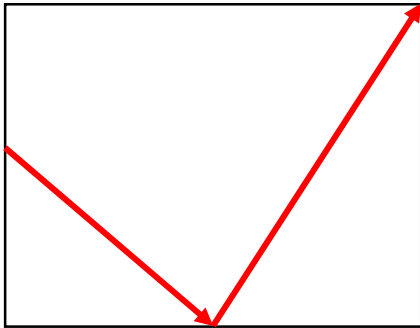
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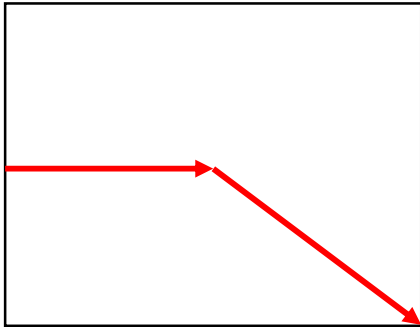
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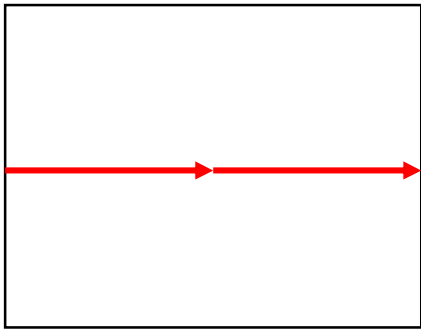
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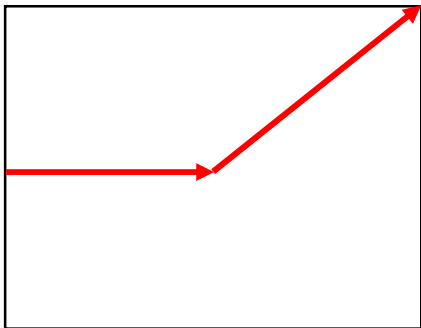
1.2 → 2.2 → 3.1



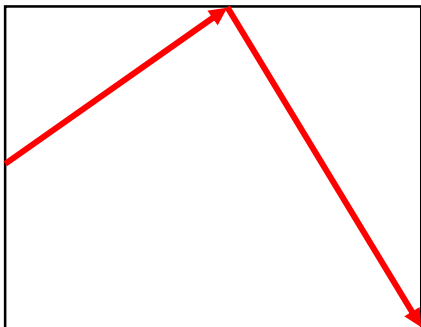
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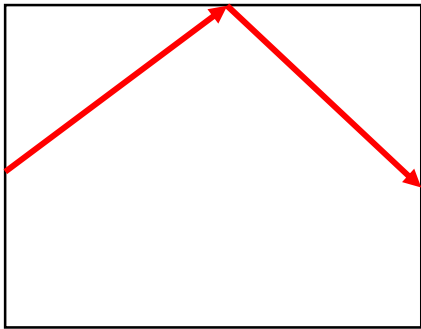
1.2 → 2.2 → 3.3



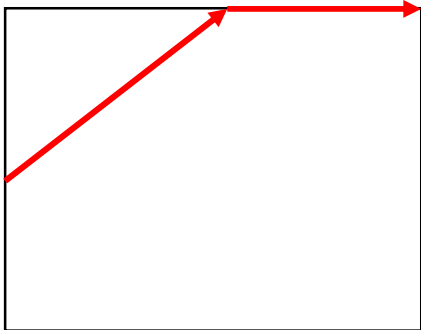
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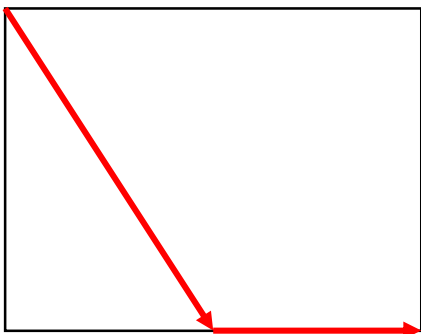
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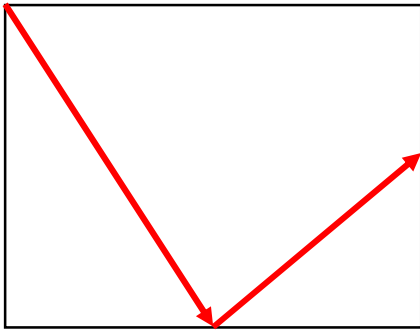
1.2 → 2.3 → 3.3



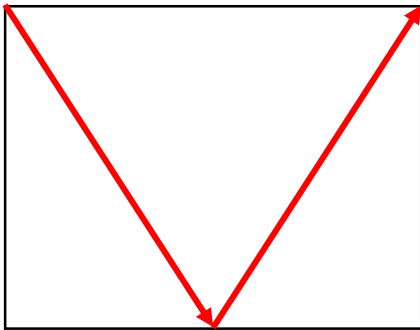
1.3 → 2.1 → 3.1



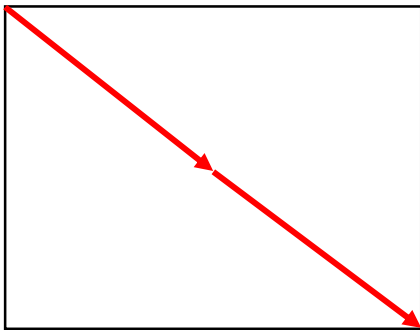
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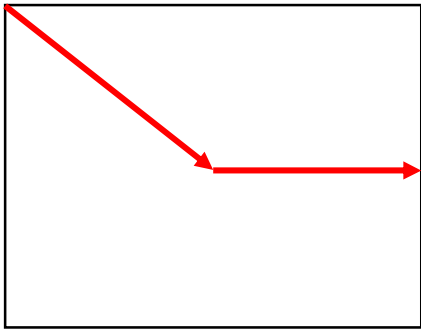
1.3 → 2.1 → 3.3



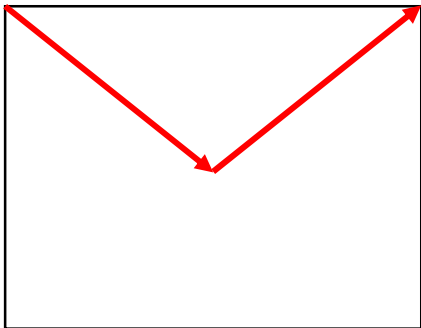
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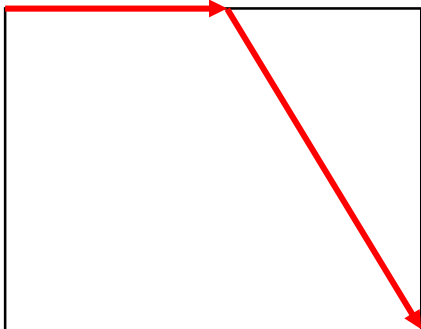
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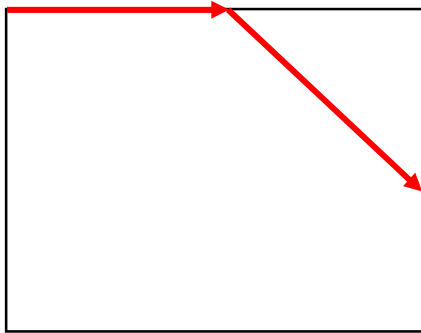
1.3 → 2.2 → 3.3



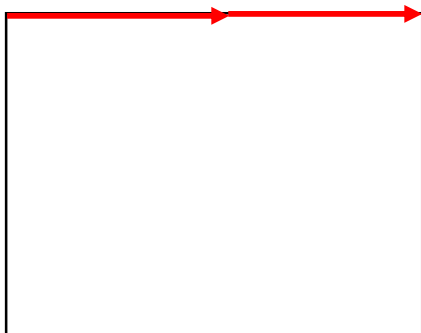
1.3 → 2.3 → 3.1



1.3 → 2.3 → 3.2



1.3 → 2.3 → 3.3



Literatur

Bense, Max, Semiotische Prozesse und Systeme. Baden-Baden 1975

Toth, Alfred, Calculus semioticus. In: Electronic Journal for Mathematical Semiotics, 2010

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