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Vierteln regelmäßiger Vielecke

1 Worum geht es?

Wir zerlegen regelmäßige Vielecke gerader Eckenzahl in vier regelmäßige Vielecke der gleichen Eckenzahl. Für ungerade Eckenzahlen siehe [hier](#).

Eine Fleißarbeit.

2 Beispiele

Die Figurenfolgen haben je eine eigene Systematik. Diese ist bei größeren Eckenzahlen leichter erkennbar.

2.1 Einstieg

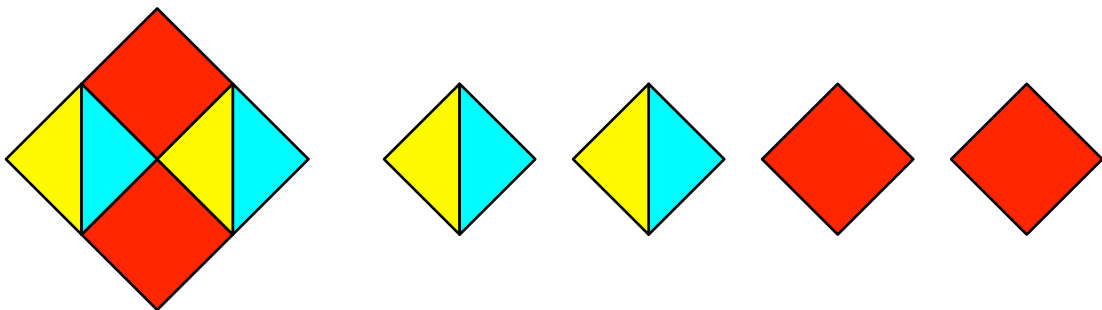


Abb. 1.4: Quadrat

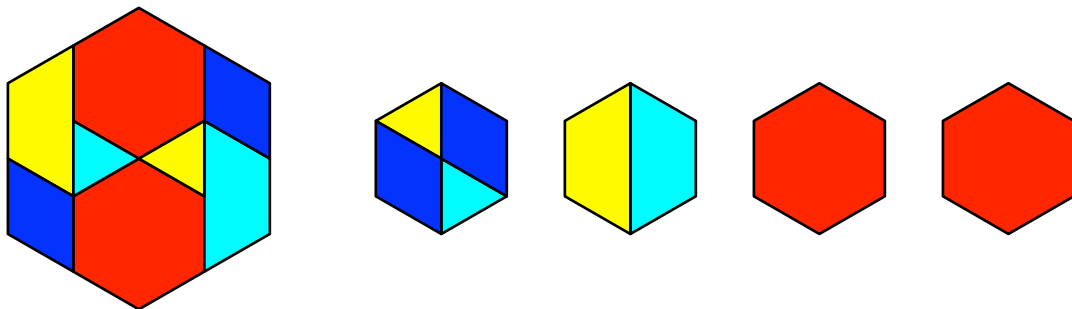


Abb. 1.6: Sechseck

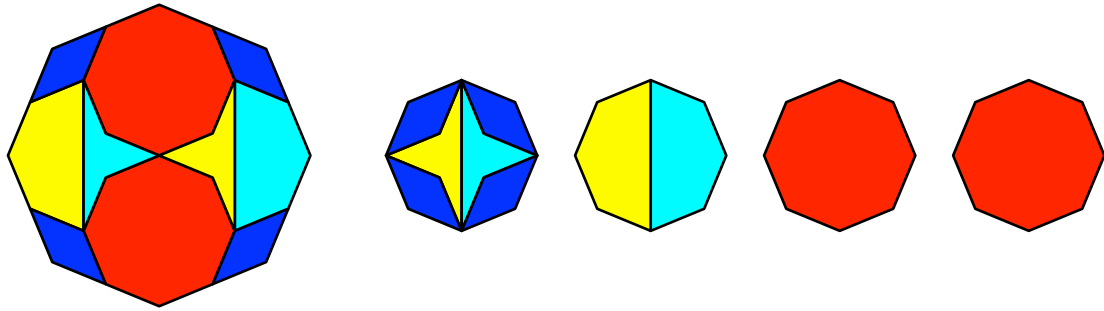


Abb. 1.8: Achteck

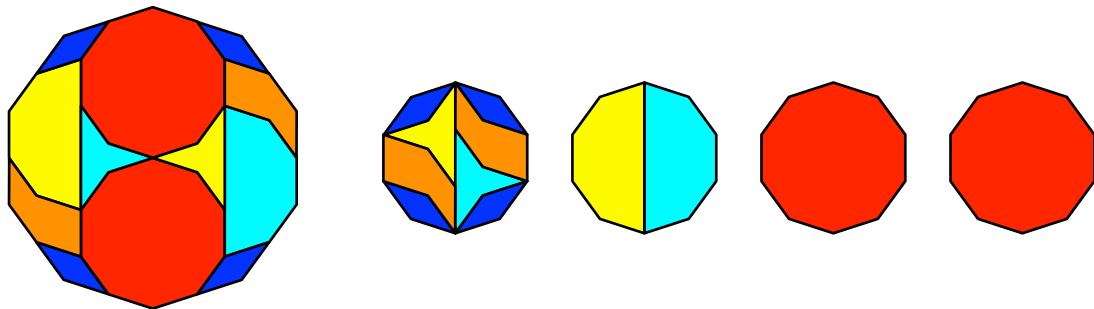


Abb. 1.10: Zehneck

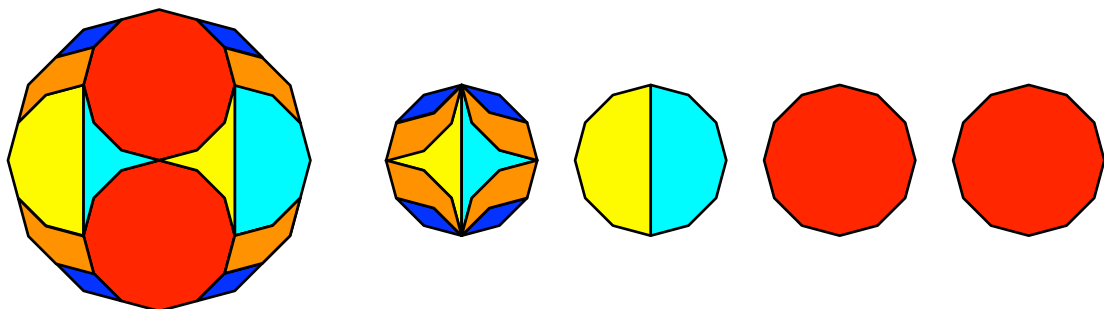


Abb. 1.12: Zwölfeck

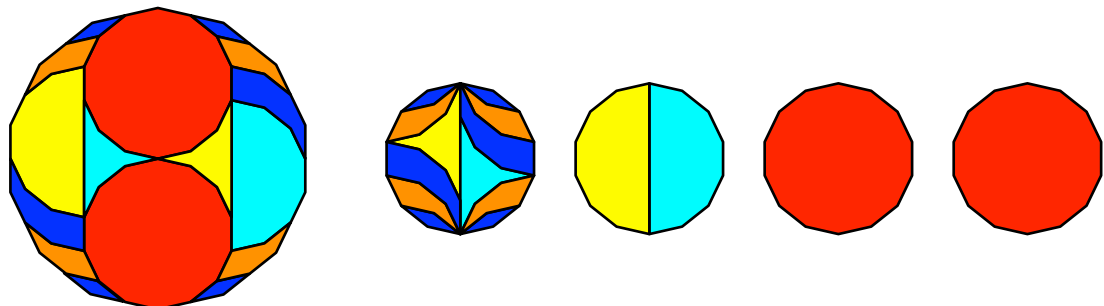


Abb. 1.14: Vierzehneck

2.2 Etwas eleganter

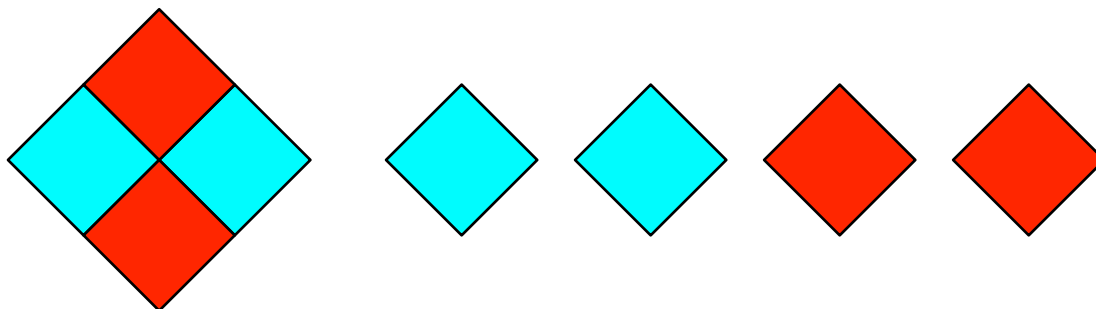


Abb. 2.4: Quadrat

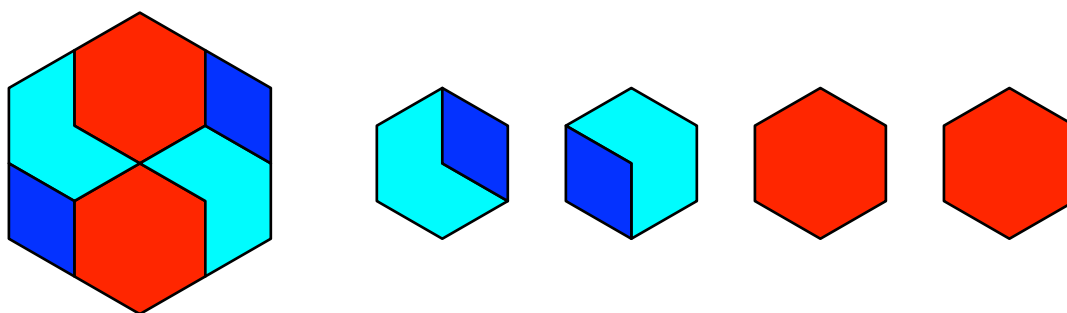


Abb. 2.6: Sechseck

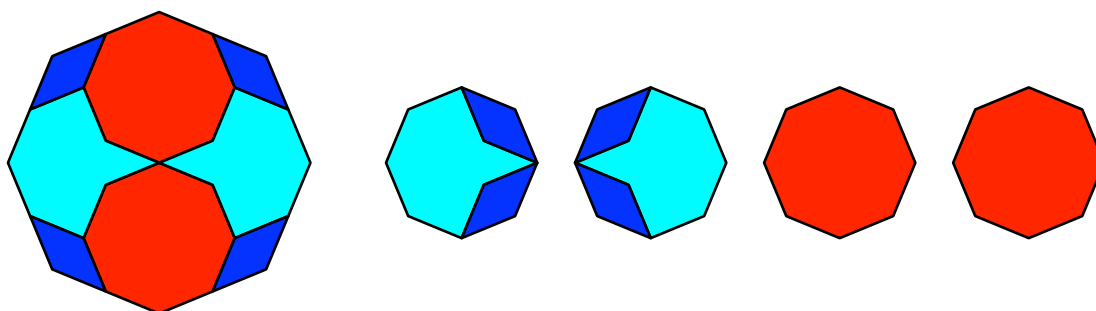


Abb. 2.8: Achteck

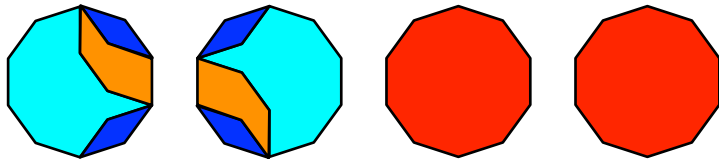
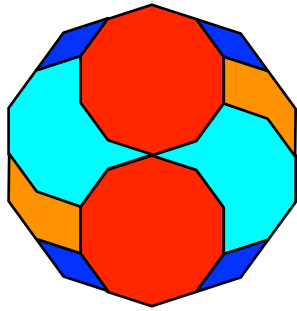


Abb. 2.10: Zehneck

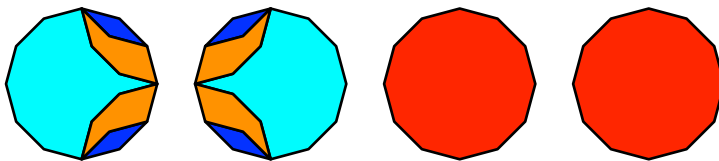
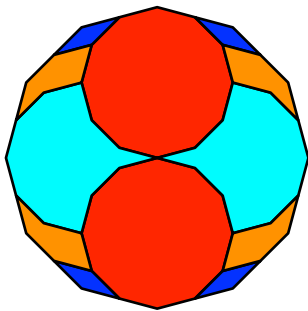


Abb. 2.12: Zwölfeck

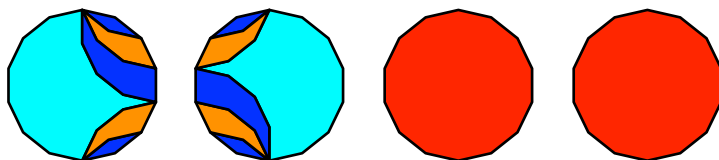
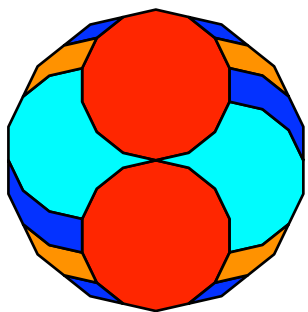


Abb. 2.14: Vierzehneck

2.3 Drehsymmetrie

Bei durch vier teilbaren Eckenzahlen gibt es Lösungen mit vierteiliger Drehsymmetrie.

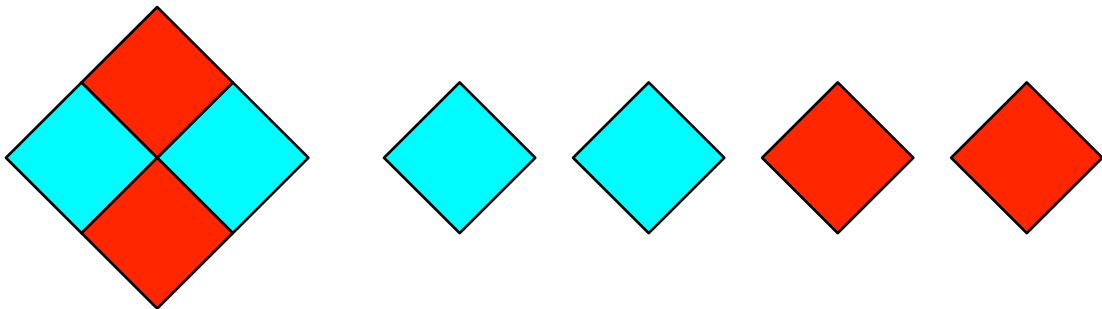


Abb. 3.4: Quadrat

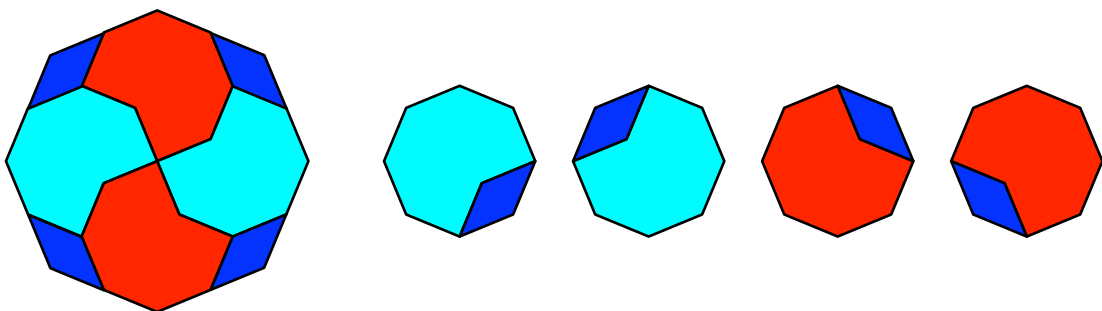


Abb. 3.8: Achteck

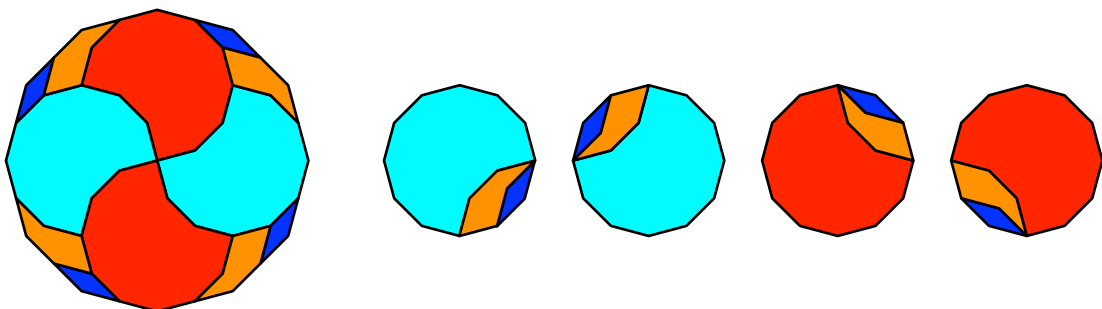


Abb.3.12: Zwölfeck

2.4 Mit Rhomben

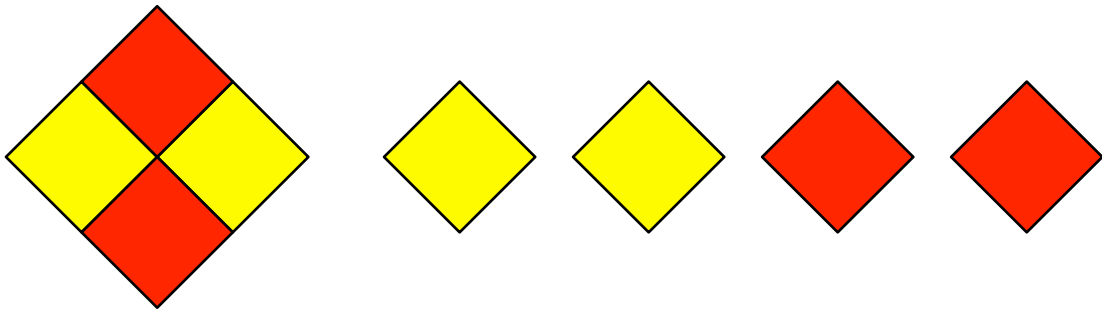


Abb.4.4: Quadrat

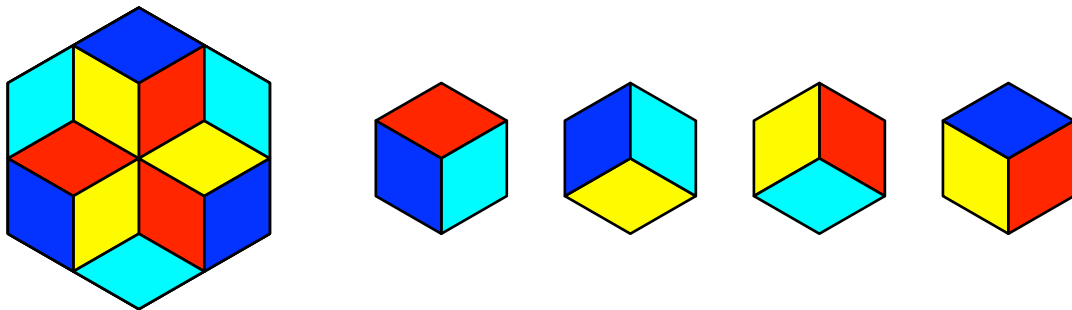


Abb. 4.6: Sechseck

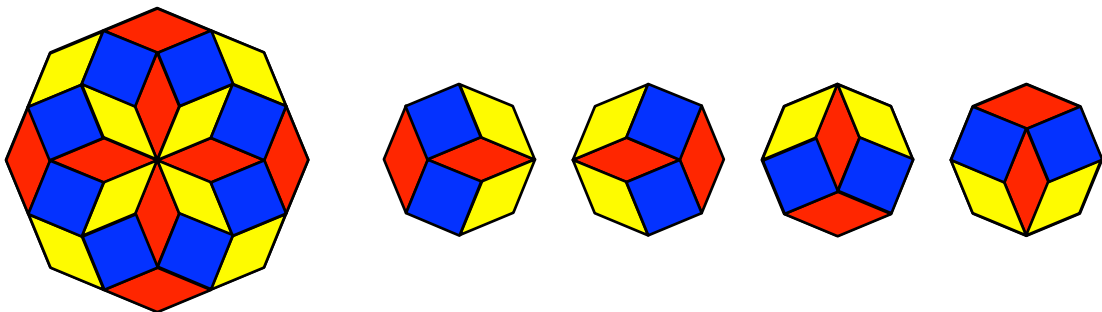


Abb. 4.8: Achteck

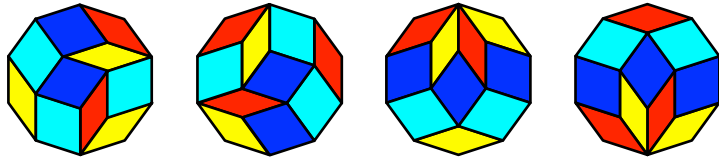
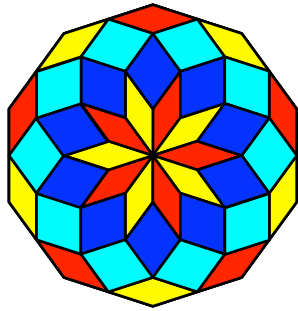


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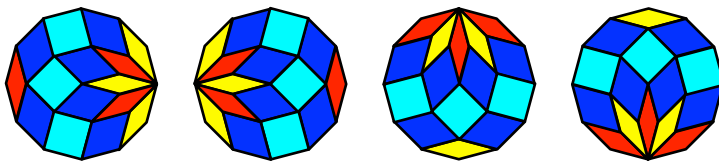
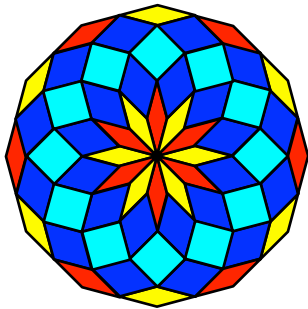


Abb. 4.12: Zwölfeck

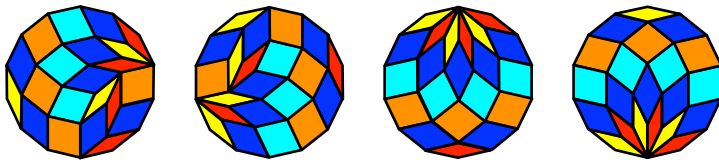
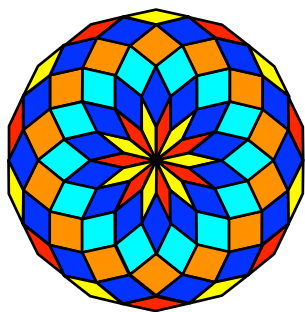


Abb. 4.14: Vierzehneck

Websites

Hans Walser: Vierteln regelmäßiger Vielecke

<http://www.walser-h-m.ch/hans/Miniaturen/V/Vierteln/Vierteln.htm>

Literatur

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