

OEIS A320431

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ABSTRACT. The regular N -gon is subdivided into smaller polygons (tiles) by the subset of lines that start at a vertex and run perpendicular to the two edges that meet at that vertex.

1. SUMMARY

Given the N sided regular polygon, its interior is dissected into non-overlapping regions (polygons, tiles) by adding $2N$ lines. Line pairs start at one of the N vertices and run at right angles to one of the two edges that meet at the vertex [1, A320431]. For even N , lines starting at “opposite” edges coincide, so effectively only N lines dissect the polygon then.

REFERENCES

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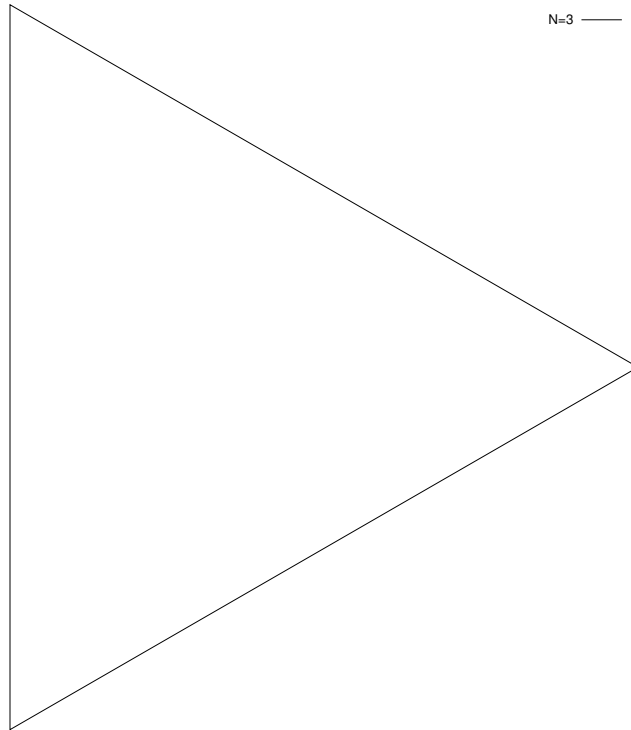


FIGURE 1. $N = 3$ sides: 1 tile.

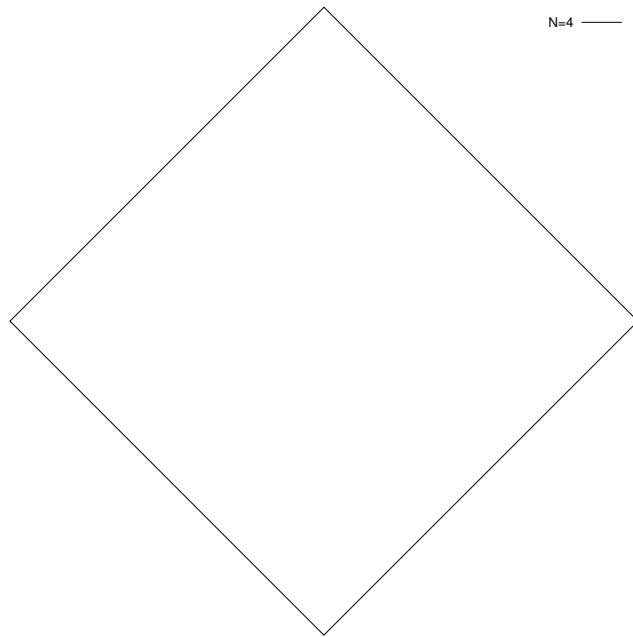


FIGURE 2. $N = 4$ sides: 1 tile.

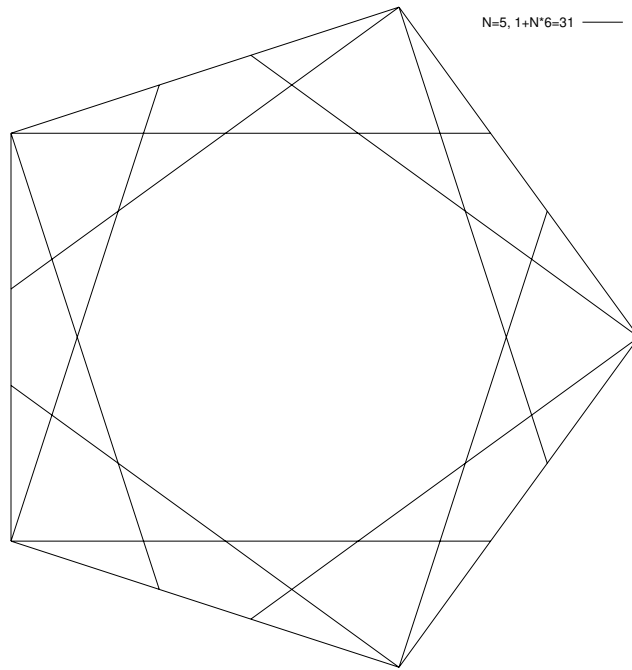


FIGURE 3. $N = 5$ sides: 31 tiles.

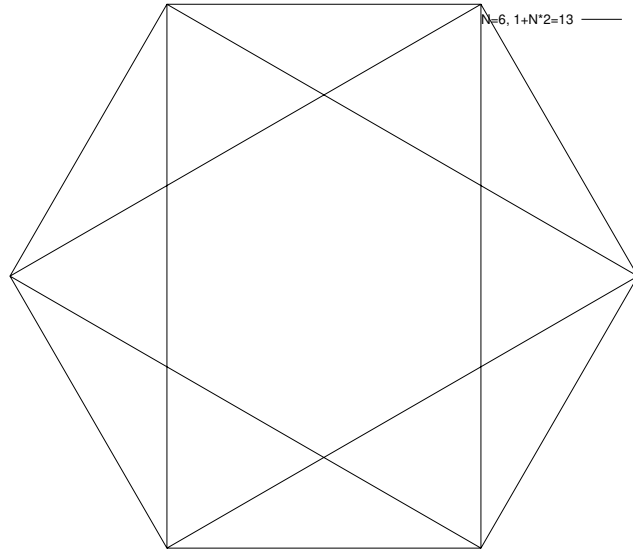


FIGURE 4. $N = 6$ sides: 13 tiles.

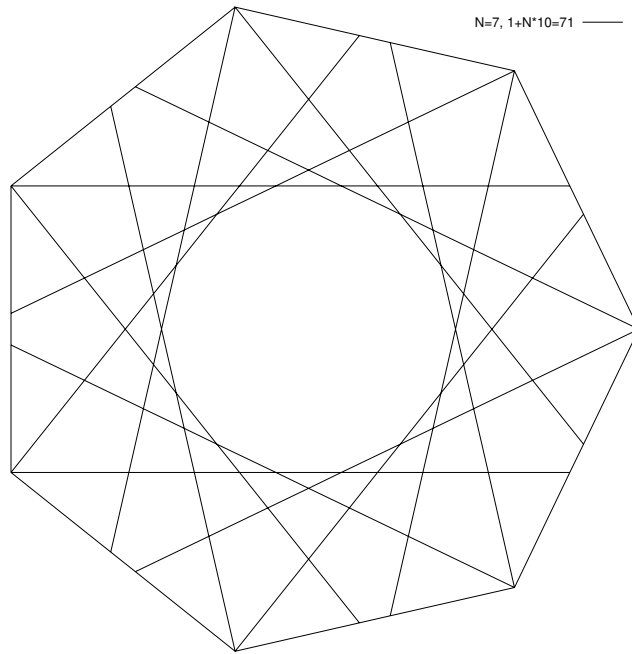


FIGURE 5. $N = 7$ sides: 71 tiles.

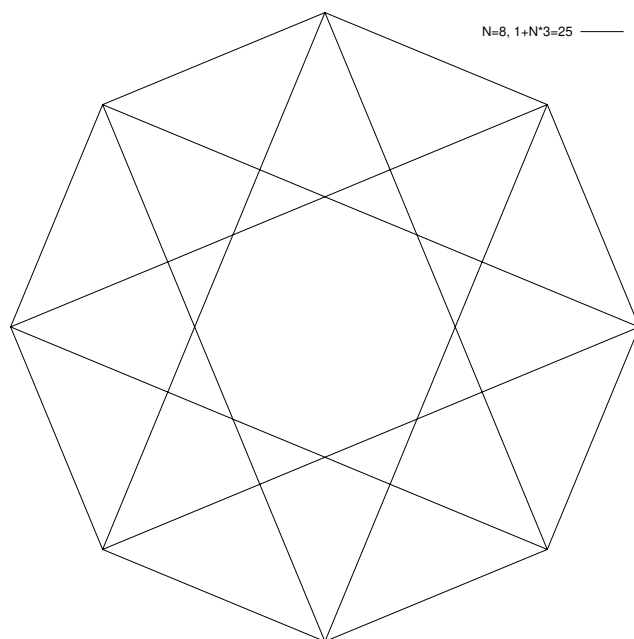
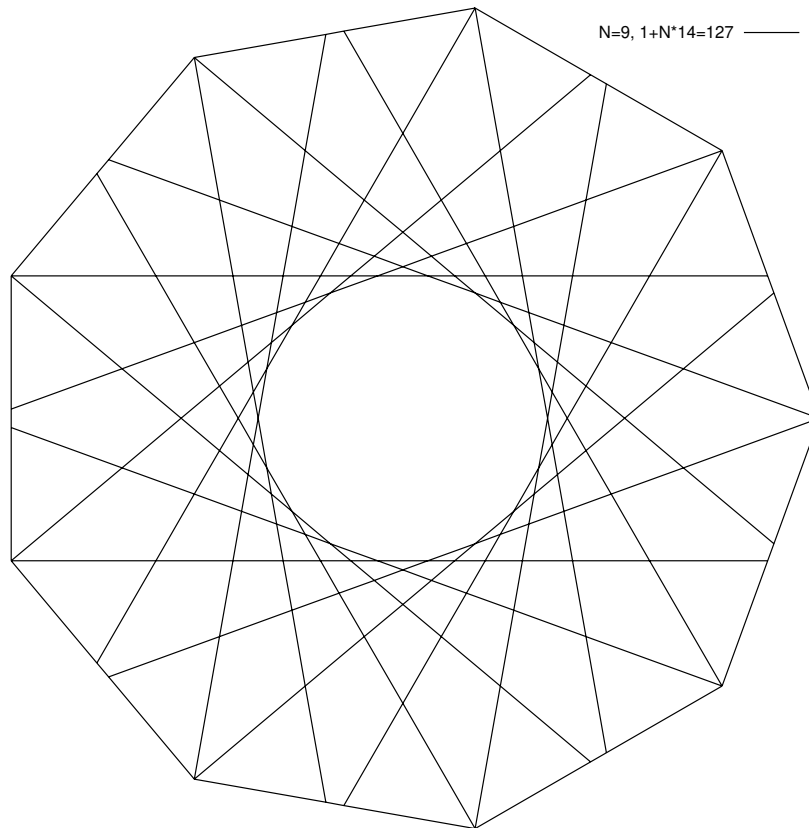


FIGURE 6. $N = 8$ sides: 25 tiles.

FIGURE 7. $N = 9$ sides: 127 tiles.

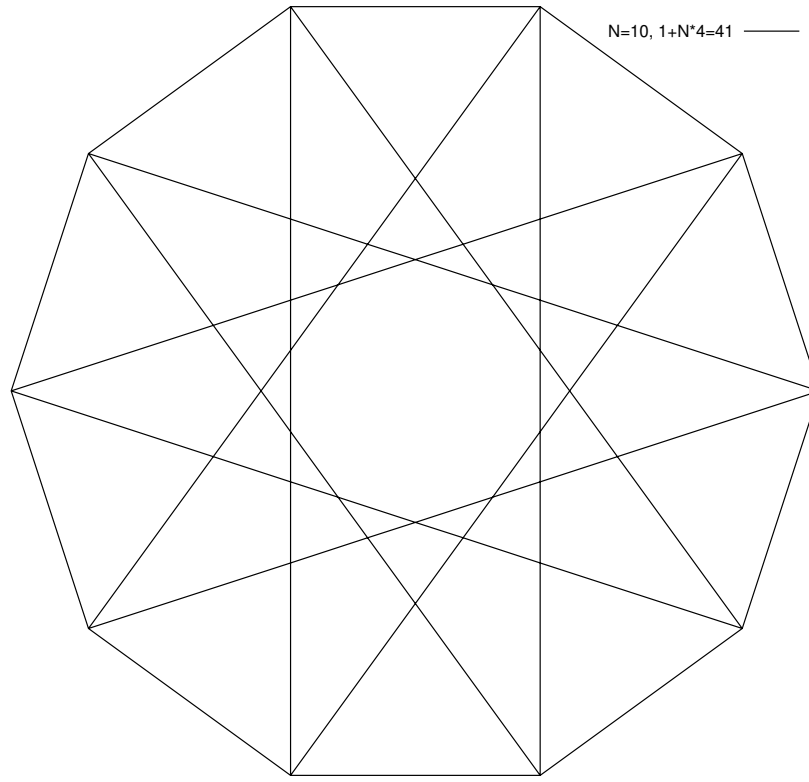


FIGURE 8. $N = 10$ sides: 41 tiles.

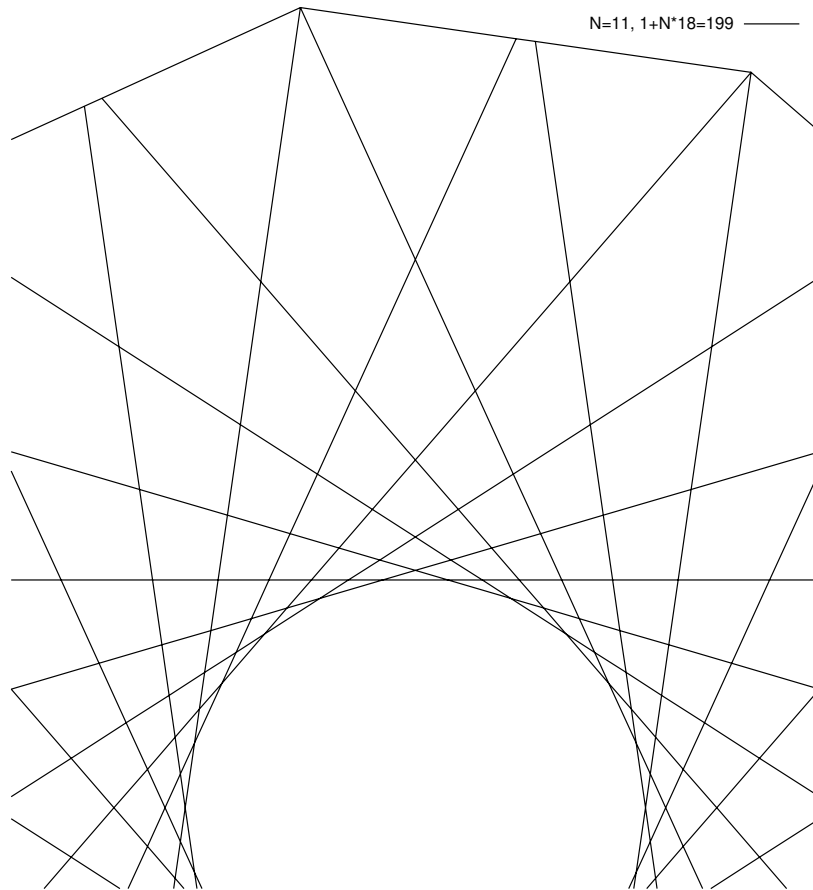
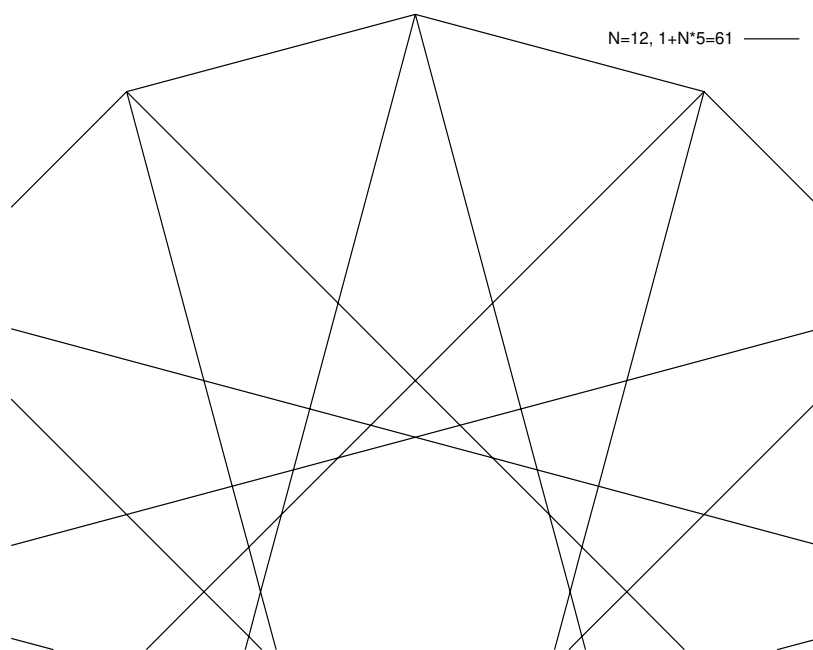
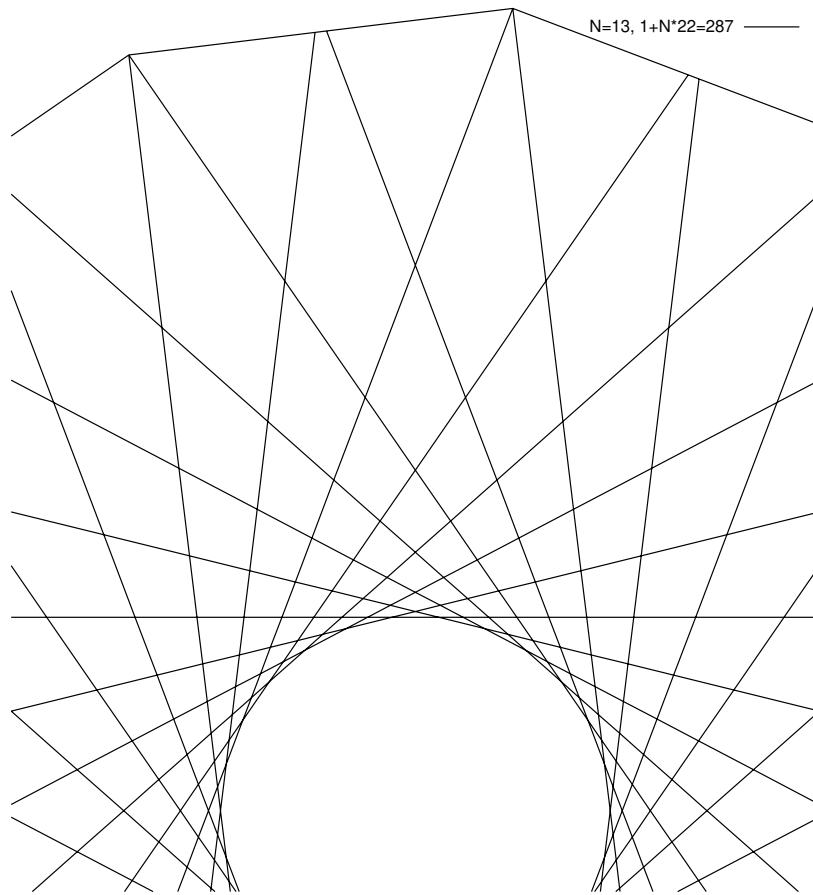


FIGURE 9. $N = 11$ sides: 199 tiles.

FIGURE 10. $N = 12$ sides: 61 tiles.

FIGURE 11. $N = 13$ sides: 287 tiles.