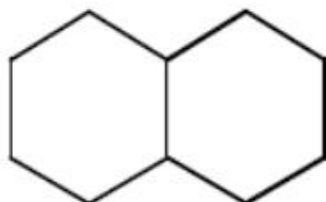


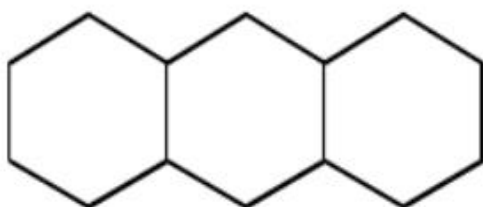
Joe uses toothpicks to make hexagons in a row.



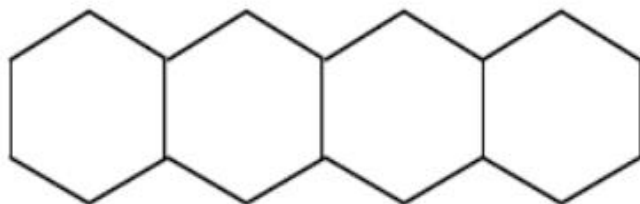
1 hexagon
6 toothpicks



2 hexagons
11 toothpicks



3 hexagons
16 toothpicks



4 hexagons

1. How many toothpicks does Joe need to make 5 hexagons? Explain how you figured it out.
2. How many toothpicks does Joe need to make 12 hexagons? Explain how you figured it out.
3. Joe has 76 toothpicks. How many hexagons in a row can he make? Explain how you figured it out.

Extension questions

4. How many toothpicks does Joe need to make 100 hexagons? Explain how you figured it out.
5. Joe has 1001 toothpicks. How many hexagons in a row can he make? Explain how you figured it out.

Adapted from Mathematical Assessment Resources Service

<https://www.insidemathematics.org/sites/default/files/materials/hexagons%20in%20a%20row.pdf>

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