

MATHCOUNTS[®] Problem of the Week Archive

Blooms for Dahlia, Rose and Lily – April 22, 2024

Problems

In the spring of 2020, Dahlia created a flower bed and planted one daffodil. The following spring, three daffodils bloomed. In fact, each spring, from 2020 to 2023, the number of daffodils that bloomed in Dahlia's flower bed was 1, 3, 9 and 27, respectively. If this pattern continues, how many daffodils can Dahlia expect to bloom in the spring of 2024?

In the spring of 2020, Rose created a flower bed and planted two tulips. The following spring four tulips bloomed. Each spring, from 2020 to 2023, the number of tulips that bloomed in Rose's flower bed was 2, 4, 8 and 16, respectively. If this pattern continues, what is the absolute difference in the number of tulips and daffodils expected to bloom in Rose's and Dahlia's flower beds in 2024?

In the spring of 2020, Lily created a flower bed and planted three hyacinths. Each spring, from 2020 to 2023, the number of hyacinths that bloomed in Lily's flower bed was 3, 6, 10 and 15, respectively. If this pattern continues, what is the total number of hyacinths that will have bloomed in Lily's flower bed from the spring of 2020 through the spring of 2024?