



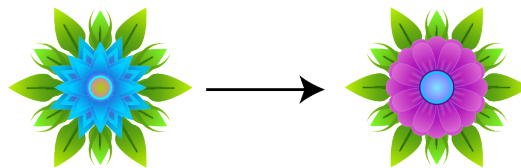
Problem of the Week

Problem C

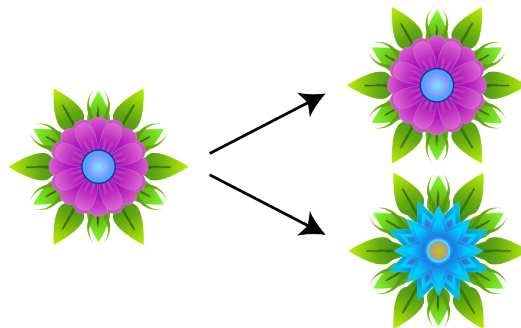
More Flowers Please

A *perennial* is a plant that lives for multiple years. It grows back each spring from roots that go dormant over the autumn and winter.

Leilani discovered two interesting species of perennials at the POTW Greenhouse called the Blue Starpoint and the Purple Parabola. After the Blue Starpoint goes dormant, it returns the following year as a Purple Parabola.



After the Purple Parabola goes dormant, it returns the following year as two plants; one Blue Starpoint and one Purple Parabola.



This cycle happens every year.

Leilani planted two Blue Starpoints and three Purple Parabolas in her garden one spring. Assuming the plants behave exactly as described, and all of them continue to survive, how many Blue Starpoints and Purple Parabolas will be in her garden after 10 cycles?