

Geometry Playtime: Winter Wonderland

Instructions:

Due Wednesday, Feb 3, 2016

Gather materials: white paper, math tools, scissors.

Watch Vi Hart's video about Snowflakes, Starflakes, and Swirlflakes:

<https://www.youtube.com/watch?v=8EmhGOQ-DNQ>

Answer questions below, and complete the activities.

Questions:

1. How does Vi fold her paper to make a 6-pointed snowflake?
2. How many lines of symmetry does this 6-pointed snowflake have?
3. What's the relationship between the number of folds in the paper and the symmetry of the paper, if you look at it when it's unfolded?
4. What is Vi's solution to the problem of paper thickness when folding it for snowflakes?
5. How does she create snowflakes with odd-numbered symmetry? (5, 7, 11 points?)
6. What's a swirlflake?
7. How is a swirlflake made?

Create:

1. A 3-point snowflake.
2. A 6-point snowflake.
3. A 12-point snowflake.
4. A 5-point starflake.
5. A 7-point starflake.
6. A 9-point starflake.
7. Two kinds of swirlflakes.

