

**FRACTAL GEOMETRY VIDEO**

Read over the following questions before watching NOVA's Fractals: Hunting the Hidden Dimension; then answer the questions as you watch or after you watch. If you need to review the video it can be found online at <http://www.pbs.org/wgbh/nova/physics/hunting-hidden-dimension.html>.

**PLEASE NOTE:** If this link is no longer good, or stops at a certain point, just do a search on the internet for "Hunting the Hidden Dimension" and use a link that works.

1) What are some applications of fractal geometry? (List at least 5, and be sure to use full sentences in your answer. Also note that the word *applications* means 'uses,' and you should be very specific about HOW fractals are used. Do not just list: movies, broccoli, Koch Curve and such. Tell me HOW they are USED.)

2) What ONE **application** of fractals most caught your attention, and why? (See the question above for a definition of the word 'application.')

3) Though fractal geometry provides amazing, powerful and widely applicable results many mathematicians and scientists did not accept this new branch of mathematics at first. Why not?

4) Which of the 5 **characteristics** of all fractals that we listed in class did you see in this video? Where did you see them? (**PLEASE NOTE** that the word 'characteristics' means 'traits' or 'properties,' in other words the *characteristics* of a fractal are the properties common to all fractals. Please list specifically what the *characteristic* is and where you saw it - not by time stamp but by topic. One example is, "I saw self-similarity shown in the Mandelberot Set.")