Discussion Questions
Math in Action Video: Cake Artistry Duration 4:07
Cake Designer – Amanda Shafer

Before Viewing the Video

To help your students enjoy and gain information from watching the video, consider preparing them by

- Giving students a purpose for watching
- Reviewing the following vocabulary terms:
  - Volume
  - Hexagon
  - Proportion
  - Reflection
  - Rotation
- Discussing:
  - How would you calculate the number of servings in a cake?
  - How would you determine the volume of a hexagonal prism?

While Viewing the Video

Use the following times to stop the video and facilitate a meaningful discussion.

Pause Point #1: *After the description of how math is used in cake artistry. (Time index 0:48)*

Discussion Point:

Synopsis: Ms. Shafer talks about some of the aspects of making a cake that involve math.

Question:
1. What specific math concepts are used in baking the cake? In decorating the cake?

Pause Point #2: *After calculating the volume and the number of slices. (Time index 1:52)*

Discussion Points:

Synopsis: Ms. Shafer describes the process she uses to calculate the number of servings she can get from a cake.

Questions:
1. Describe the process she uses.

2. What formulas might she need for calculating the volumes she describes?

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Pause Point #3: *After the descriptions of the shapes of the cakes and the math involved with these shapes. (Time index 2:46)*

Discussion Points:

Synopsis: Ms. Shafer lists some of the shapes she uses when making cakes.

Questions:
1. What are some of the typical shapes for a cake mentioned in the video?

2. What shapes do you think she used to create some of the cakes seen in the video? (e.g., the crabs, the football, the M with the terrapin or the guitar?)

3. Why is it important for all of Ms. Shafer's measurements to be correct?

Pause Point #4: *At the end of the video. (Time index 4:07)*

Synopsis: Ms. Shafer lists some of the math concepts she uses when decorating cakes.

Discussion Points:

Questions:
1. What are some of the math concepts used when decorating cakes?

2. Describe how each concept is used in the process of making and decorating a cake.

3. Do you think that Ms. Shafer uses scale drawings in her work? If so, how might she use them?

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