

STUDENT VERSION

ICE MELT

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Abstract: We offer up the claim of a store catalog that its ice ball mold allows users to “...make ice balls that outlast cubes and won’t water drinks down.” We ask students to build a mathematical model to defend or contradict this claim.

STATEMENT



The image is a promotional graphic for Brookstone. On the left, a red banner with white text reads "Best Gifts" and a green arrow points right with the word "GUARANTEED" in red. Below this, the text "K. NEW On the ROCK Glass with Ice Ball Maker" is displayed. A paragraph describes the product: "Unique glass makes it easy to swirl ice for better aroma. Lets you make ice balls that outlast cubes and won't water drinks down." To the right, there is an image of the product: a round glass filled with amber liquid and a large spherical ice ball, with two more ice ball molds shown separately. Below the image, a list of products and prices is provided:

843819 (Includes 1 Ice Ball Mold)	\$19.99
Ice Ball Mold 2-Pack 843822	\$10.99
Gift Set (2 Glasses & 4 Molds) 854465	\$39.99

Figure 1. Copy of notice from *Brookstone Holiday Gift Guide* [1] in which it is claimed that Brookstone’s spherical ice ball mold “Lets you make ice balls that outlast cubes and won’t water drinks down.”

In a Brookstone catalog [1] (see Figure 1), received by the author on 21 November 2013, there is pictured a “Rock Glass with Ice Ball Maker,” a device for making spherical ice balls to put in

drinks. The claim is that this device, “Lets you make ice balls that outlast cubes and won’t water drinks down.”

1. Use mathematical modeling to defend or contradict this claim.
2. Design an experiment to test this claim.
3. Carry out the experiment and use any data in (2) to validate your model in (1).

REFERENCES

- [1] Brookstone. 2013. *Brookstone Holiday Gift Guide*. November 2013. p. 43.