Push Questions for the Popcorn Cylinder Activity

* *Which impacts the volume more: the radius or the height? Show your findings to help someone understand your thinking. (You can give out the Which Measurement Impacts the Volume handout to support students who are stuck, but let them try to figure out their own way first.)*
* The surface area of each of our cylinders is 93.5 square inches. Make two other cylinders with the same surface area. What do you notice about their volumes? Be prepared to share your findings.
* Can a rectangular piece of paper give you the same amount of popcorn no matter which way you make the cylinder? Prove your answer.
* Is there a way to get more popcorn using the exact same amount of paper? How can you get the most popcorn using the same amount of paper.
* How many different ways could you design a new cylinder to double your popcorn? Which would require the least extra paper?