

How many Classic Moana™ dolls must Disney sell to cover its costs of developing the sustainable packaging for the doll?

Walt Disney's new movie, Moana™, opened in theaters across the United States in late November 2016. The movie is about an island teenager, Moana™, who sets out on an action-packed voyage to save her people. Disney has released a doll modeled after the heroine of the movie, its Classic Moana™ doll. The doll is 11" high and features moveable arms and legs and long, curly hair. Assume that the doll is sold wholesale to retailers by Disney for \$10.

In the U.S., almost one third of all waste comes from packaging – and only 30% of that packaging has recycled content. Several years ago, Disney's consumer products division affirmed its commitment to sustainability. Over the span of a few years, Disney developed its Smart Packaging Initiative (SPI), which is a metric-driven approach to assess the sustainability impact of its packaging. The SPI tool emphasizes three things in packaging design: 1) design for recyclability; 2) responsible sourcing; and 3) material optimization including material reduction. Disney uses the tool to help design packaging for its new products and has made its SPI tool available for other companies to use.

The packaging design for Disney's Classic Moana™ doll benefited from Disney's use of its SPI tool. The Moana™ doll packaging is made from 70% recycled content. It is printed with vegetable-based inks and contains no glue or tape, which all contributes to the packaging being able to be recycled more easily than traditional packages. In addition, Disney printed the pattern for a boat on the package so that children and their parents can assemble a boat out of the packaging, allowing for creative use of the packaging.

Costs of developing the sustainable packaging for the Moana™ doll would most likely include engineering costs, the costs of special dies used to cut out each package from its original cardboard sheet, and marketing development costs.

Questions

1. Would Disney include the costs of developing its SPI tool in calculating the break even volume for its Moana™ doll packaging? Why or why not?
2. Assume that Disney invested \$2 million in developing the sustainable packaging for the Moana™ doll and that it has a contribution margin ratio of 40% on its toy line in general. What would be the break even volume of Moana™ dolls for the sustainable packaging development costs? Assume these sustainable design costs are the only fixed costs incurred in the manufacture of the Moana™ dolls.
3. Do you think Disney is motivated by profits only when developing its sustainable packaging? Why or why not?