

IEMS 326, Homework 4, Due 2/16/2011

1. Source and solution: <http://people.brunel.ac.uk/~mastjjb/jeb/or/decmore.html>

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3. [Source Kent Webb, Business 260] Buzzy-B Toys must decide the course of action to follow in promoting a new whistling yo-yo. Initially, management must decide whether to market the yo-yo or to conduct a test marketing program. After test marketing the yo-yo, management must decide whether to abandon it or nationally distribute it.

A national success will increase profits by \$500,000, and a failure will reduce profits by \$100,000. Abandoning the product will not affect profits. The test marketing will cost Buzzy-B a further \$10,000.

If no test marketing is conducted, the probability for a national success is judged to be 0.45. The assumed probability for a favorable test marketing result is 0.50. The conditional probability for national success given favorable test marketing, is 0.80, for national success given unfavorable test results, it is 0.10.

Construct the decision tree and solve it. Make sure to label the nodes. Don't forget the probabilities.

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