Practice #1:

A company is making a DNA testing kit and wants to get approval from the FDA. There is a 60% chance of FDA approval and an 80% chance that the stock will double if approval is given. The chance the stock will double without FDA approval is 25%.

Q1: What is the probability that the FDA approves the kit and the stock price doubles?

Q2: Lets say we don't have any knowledge of whether or not the FDA has approved the kit. If we see that the stock price has doubled, what is the probability that the kit has gotten FDA approved?

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P(approve & doubles) = 0.6 X 0.8 = 0.48

Q2: Lets say we don't have any knowledge of whether or not the FDA has approved the kit. If we see that the stock price has doubled, what is the probability that the kit has gotten FDA approved?

P(approved | doubled) = P(approve & doubles)/P(doubles)
= 0.48/(0.48 + 0.1)

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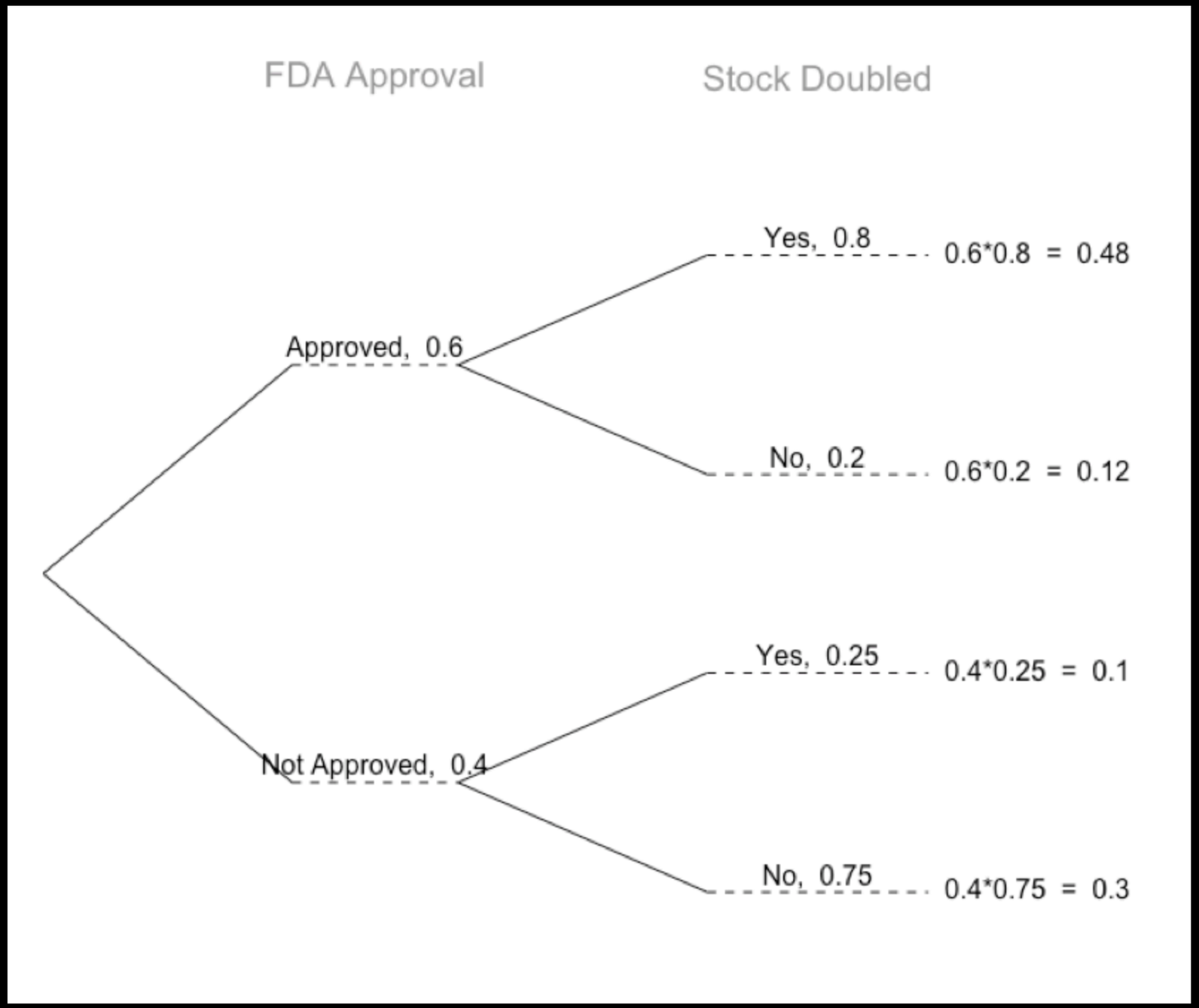

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