Probability Worksheet (Tree Diagrams)

1. Given that the chance of winning a prize on a scratcher ticket is 17%. A person stops at a convenience store on the way home from work every Monday and Tuesday to buy a scratcher ticket to play the game.

a) Develop a tree diagram showing the four possible outcomes of playing over these two days. Call stage 1 “Monday,” and use the symbols W for a winning ticket and L for a non-winning ticket.

b) What is the chance that the player will not win on Monday but will win on Tuesday?

b) What is the chance that the player will win at least once during the two-day period?

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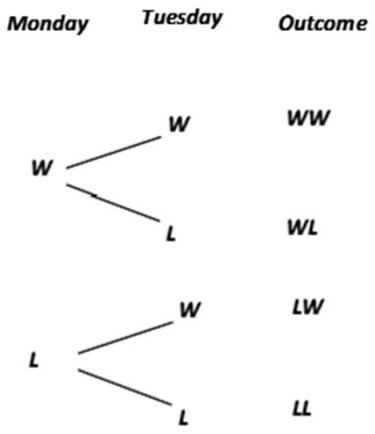

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LW outcome: $(0.83)(0.17) = 0.1411$

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"Winning at least once" would include all outcomes except LL (which has a 0.6889 *probability). The probabilities of these outcomes would sum to* 0.3111.