

MDM 4U1
UNIT 1: PROBABILITY – TIPS ASSIGNMENT



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THINKING: _____
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THE FOLLOWING QUESTIONS ARE DIRECTLY RELATED TO THE UNIT YOU ARE CURRENTLY WORKING IN, THOUGH THEY MAY REQUIRE MORE THOUGHT THAN THOSE YOU HAVE ALREADY ENCOUNTERED. PLEASE PROVIDE A FULL, POLISHED SOLUTION IN THE SPACE PROVIDED.

SHOW ALL WORK TO GUARANTEE FULL MARKS.

Consider an ALDS playoff series (best of seven) where the *Toronto Blue Jays* are playing against the Texas Rangers.

- Toronto hosts the first, second and, if needed, fifth and seventh games of the series
- The Jays have a 76% chance of beating the Rangers at home in the first game.

After that:

- They have a 68% chance of winning home games following a win.
- They have a 62% chance of winning home games when bouncing back from a loss.
- They have a 35% chance of winning in Texas after a win.
- They have a 45% chance of winning in Texas after a loss.

ON A SEPARATE PAGE construct a tree diagram to illustrate ALL possible outcomes through 5 games.

Then, answer the following:

What is the probability that the Jays win the series in exactly five games?

