

- 5** A game is played with an ordinary fair 6-sided die. A player throws the die once. If the result is 2, 3, 4 or 5, that result is the player's score and the player does not throw the die again. If the result is 1 or 6, the player throws the die a second time and the player's score is the sum of the two numbers from the two throws.

(a) Draw a fully labelled tree diagram to represent this information. [2]

Events A and B are defined as follows.

A : the player's score is 5, 6, 7, 8 or 9

B : the player has two throws

(b) Show that $P(A) = \frac{1}{3}$. [3]

.....

.....

.....

.....

.....

.....

.....

.....

.....

[2]

[illegible]

[3]

This image shows a full page of white paper with horizontal dashed lines, typical of primary school writing paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.