

(11 marks)

- For example, if a game resulted in the five rolls shown in Table 1, a player would receive a total of 5 points.

Roll 1	Roll 2	Roll 3	Roll 4	Roll 5
				

(2) Explain why it is *not* possible for a player to receive a total of 0 points in a game.

$$\Pr(X_6 = x) = \left(\frac{5}{6}\right)^{x-1} \left(\frac{1}{6}\right)$$

(1) Determine the probability that a player receives a total of *exactly* 2 points.

(2) Determine the probability that a player receives a total of 5 or 6 points.

page 4 of 18

- $$\Pr(X_n = x) = \left(1 - \frac{1}{n}\right)^{x-1} \left(\frac{1}{n}\right)$$

(i) Consider a game where an unbiased ten-sided dice is used.

PLEASE TURN OVER