

3. In a game, a player can score 0, 1, 2, 3 or 4 points each time the game is played.

The random variable S , representing the player's score, has the following probability distribution where a , b and c are constants.

s	0	1	2	3	4
$P(S = s)$	a	b	c	0.1	0.15

The probability of scoring less than 2 points is twice the probability of scoring at least 2 points.

Each game played is independent of previous games played.

John plays the game twice and adds the two scores together to get a total.

Calculate the probability that the total is 6 points.