

4

(a) Find the probability that he obtains a 4 for the first time on his 8th throw.

[1]

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(b) Find the probability that it takes no more than 5 throws for Ramesh to obtain a 4.

[2]

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Ramesh now repeatedly throws two ordinary fair 6-sided dice at the same time. Each time he adds the two numbers that he obtains.

(c) For 10 randomly chosen throws of the two dice, find the probability that Ramesh obtains a total of less than 4 on at least three throws. [4]

[4]

[illegible]