

IMM - DTU

We define events B_i

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$$P(B_i)$$

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We define events B_i that the man hits the bull's eye exactly i times. The probabilities of the events B_i is given by the Binomial distribution

$$P(B_i) = \binom{8}{i} 0.7^i 0.3^{8-i}$$

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$$P(B_i) = \binom{8}{i} 0.7^i 0.3^{8-i}$$

Question a) The probability of the event

$$P(B_4)$$

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Question a) The probability of the event

$$P(B_4) = \frac{8 \cdot 7 \cdot 6 \cdot 5}{4 \cdot 3 \cdot 2 \cdot 1} 0.7^4 0.3^4 =$$

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Question a) The probability of the event

$$P(B_4) = \frac{8 \cdot 7 \cdot 6 \cdot 5}{4 \cdot 3 \cdot 2 \cdot 1} 0.7^4 0.3^4 = 0.1361$$

Question b)

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$$P(B_4 | \cup_{i=2}^8 B_i)$$

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Question c)

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Question c)

$$\binom{6}{2} 0.7^3 0.3^4$$

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Question c)

$$\binom{6}{2} 0.7^3 0.3^4 = 0.0595$$