Heads?

What is the probability of getting exactly two heads in *three* flips of a coin?

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What is the probability of getting exactly two heads in *four* flips of a coin?

_____

What is the probability of getting exactly two heads in *six* flips of a coin?

_____

What is the probability of getting 0, 1, 2, 3, 4, 5 and 6 heads on six flips of a coin?

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_____ _____

What is the probability of getting *exactly* two heads in *sixteen* flips of a coin?

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Is the probability of getting *exactly* one six in five rolls of a die $\frac{{}^5C_1}{6^5}$? Can you find a solid argument to support this or is the answer wrong? If it is wrong, what is the correct answer?

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What is the probability of getting exactly four sixes in seven rolls of a 6-sided die?

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