Probabilities - Gambling

Sujet comportant deux pages. L'usage de tout modèle de calculatrice, avec ou sans mode examen est autorisé.

Gambling: why do we love it so much?

It has been suggested that in modern times, we gamble[1] as much because it is socially acceptable but it has gripped humanity for thousands of years. One of the main aspects believed to draw us to gambling is the idea of getting something for nothing. You have the chance to have a life-changing win, for a
5   minimal stake and there is something incredibly powerful in that.

Different people of different ages and socio-economic backgrounds will gamble for a variety of reasons and motivations, so it seems there is no simple answer to the question at hand. For example, gambling preferences can say a lot about an individual. Older players will tend to choose activities that are easy on the mind,
10 less stressful with less commitment to concentration which is why bingo and slot machines[2] are big winners with that age group.

Research has also found that men are 7 ½ times more likely than women to develop a problem with gambling. […] Men are greater risk takers than women, in addition to be more impulsive.

15 Women tend to be more guarded when it comes to betting. They consider the negative outcomes of their gambling more and bet accordingly. As a consequence, women typically do not, like men, get into as much financial difficulty and when they do, they do not then gamble more in an attempt to win it back.

                                                    www.slotsbaby.com *February 2018*

Dégagez les idées essentielles du texte.

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[1] gamble: risk or bet money on the outcome of an event

[2] slot machine: a machine that you try to win money from, by putting coins into it.

Exercise :

A jar contains many marbles. 30% are red and the others are of another colour.
In a second jar there are 4 cards from a deck of cards: one Jack, one Queen, one King and one Ace (the colour doesn't matter).
Marbles are indistinguishable when you touch them. So are the cards.

John wants to play a game whose rules are as follows:
- He picks one marble at random in the first jar.
- If the marble is red, he picks one card at random in the second jar
  If he gets an Ace, he wins a computer; otherwise he doesn't win anything.
- If the marble is not red, then he rolls a fair 6-die.
  If he gets 6, then he wins a phone; otherwise he doesn't win anything.

1. Draw a tree diagram corresponding to the text.
2. Given that John got a red marble, what is the probability for him to get an Ace?
3. What's the probability for John to win a computer?
4. How likely is he to win a prize at the end of the game?
5. Given that he won a prize, what is the likelihood of his getting a red marble?