to ascertain the material facts of a case before they make statements, or draw conclusions.

ADAMS AND JEFFERSON.

We have heretofore extracted a few interesting articles from the CHAMELEON, a journal conducted by an association of young gentlemen, students of the University of Virginia. We add, to-day, another, of a very appropriate character, inasmuch as it relates partly to him whose pride and boast it was, to have inscribed upon his tomb-stone that he was the father and the founder of that institution.

It is curious, as combining Mathematics and Biography with an extract from tables calculating the value of lives.

DEATH OF ADAMS AND JEFFERSON.
Le vrai n'est pas toujours vraisemblable.

BOILEAU.

When it was announced that the death of *Thomas Jefferson* had occurred on the fourth of July, 1826, at the time when the whole American people were engaged in celebrating the jubilee of their independence, in the consummation of which he had acted so distinguished a part, we were struck with wonder at the extraordinary coincidence. But when the intelligence soon afterwards arrived, that his illustrious colleague, *John Adams*, had died on the same day, our astonishment knew no bounds. Every one considered the concurrence of these two events, each in itself so improbable, as a prodigy almost miraculous, and nothing but an amount of evidence absolutely irresistible could have convinced us of its truth.

But while every one can thus feel that this event was in the highest degree improbable, we have not seen any attempt made to estimate, in numbers, the amount of this improbability. Yet the problem is as capable of solution as any other in the doctrine of chances; and, as we are sure that it cannot be considered destitute of interest, we shall now present it to our readers. It may be stated as follows:

At the time of the declaration of independence, what was the probability that Adams and Jefferson should both die on the celebration of the jubilee, fifty years thereafter?

The following are the data for solving this problem:

John Adams was born on the nineteenth of October, 1735—consequently, on the fourth of July, 1776, he was 40.7 years old; and on the fourth of July, 1826, when he died, he was 90.7 years old.

According to the Chester Table of mortality, given in the Library of Useful Knowledge, at the end of the Treatise on Probability, out of 10,000 individuals born,

The number living at 40.7 years, is 4465,
"   "   "   90.7   "   185,
"   "   "   91.7   "   155.

Thomas Jefferson was born on the second of April, 1743—consequently, on the fourth of July, 1776, he was 33 1-4 years old; and, on the day of his death, he was 83 1-4 years old.

By the Chester Tables, out of 10,000 born,

The number living at 33 1-4 years is 4949,
"   "   "   83 1-4   "   493,
"   "   "   84 1-4   "   436.

Now the probability, on the day of the declaration of independence, that Adams would live at least fifty years, is by the above data, $\dfrac{185}{4465}$

Arrived at the age of 90.7, the probability that he would live at least one year longer is $\dfrac{155}{185}$

Consequently, the probability that he would *not* live one year longer, is, $1 - \dfrac{155}{185} = \dfrac{30}{185}$

Hence the probability that he would live fifty years, and die within the following year, is equal to the product of the two former probabilities, or is $\dfrac{185}{4465} \cdot \dfrac{30}{185} = \dfrac{30}{4465}$

Now we may reasonably make the assumption, that the probability of the death occurring on any one day of this year was as great as on any other, so that the probability of its happening on any specified day, as the first, for instance, is $\dfrac{1}{365}$

Hence, finally, we have the probability that Adams would live fifty years after the declaration of independence, and die on the first day of the following year $\dfrac{30}{4465} \cdot \dfrac{1}{365} = \dfrac{1}{54324}$

that is, the odds are 54323 to 1, against this occurrence.

In the same manner, we get the probability of Jefferson's living at least fifty years $= \dfrac{493}{4949}$

The probability of his then living one year longer $\dfrac{436}{493}$; and the probability that he would

die within the year, $1 - \dfrac{436}{493} = \dfrac{57}{493}$.

The probability that he would live fifty years, and die within the following year, $\dfrac{493}{4949} = \dfrac{57}{493}$

$\dfrac{57}{4949}$.

The probability that he would live fifty years, and die on the first day of the following year,

$\dfrac{57}{4949} \cdot \dfrac{1}{365} = \dfrac{1}{31689}$

Lastly, the probability that both these events should happen together, or that Adams & Jefferson should both die on the fiftieth anniversary of the declaration of independence, is $\dfrac{1}{54324}$

$\dfrac{1}{31689} = \dfrac{1}{1721,473236}$

Hence it appears that the odds were more than 1721 millions to 1 against the concurrence of both these events; or that a bet against it, to correspond with the chances, should have been more than 17 millions of dollars to a cent. Yet it did actually happen; and we see how much reason there was for the universal astonishment which it excited.

Extract of a letter from Illinois to the Editor,